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By Warner Fite

Professor in Princeton University
Author of "Individualism" (Longmans)

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THE LIVING MIND

ESSAYS ON THE SIGNIFICANCE OF CONSCIOUSNESS

By

WARNER FITE

Professor in Princeton University

LINCOLN MAC VEAGH
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To

LLEWELLYN JONES

Of the essays in this volume the first, or introductory, essay is new, the second was written in 1908, and the others in the years 1912 to 1918. They were printed originally, in the order in which they appear here, in several periodicals, as follows: II, V, and VI in *The Philosophical Review;* III, IV, VII, VIII, and XI in *The Nation;* IX in *The Unpopular Review;* X and XIII in *The Journal of Philosophy;* XII in *The International Journal of Ethics;* and XIV in *The Atlantic Monthly.* In the reprinting a few minor changes have been made and a few passages have been rewritten, mainly for the purpose of making them more intelligible.

To the editors and publishers of these periodicals I beg to express my thanks for permission to reprint.

W. M.

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I

INTRODUCTION: CONSCIOUSNESS, WHAT IS IT?

In these essays, written to say what was uppermost in my mind at the time, there will be found, I believe, a rather definite trend of motive and a convergence upon one all-comprehensive question. The central topic, indicated in the title of the volume, is mind, or "consciousness." Closely akin to this is the conception of knowledge, in the sense of a consciousness of an object; and this conception of knowledge is responsible for the problems of "epistemology," now repudiated by the current philosophy of realism, naturalism, or behaviorism, which denies the reality of consciousness except as a form of human behavior and the reality of knowledge except as a process of prediction. Knowledge forms the subject-matter of the two essays on pragmatism (V and VI) ; realism is treated in essays IV, VII and VIII and behaviorism in XIV. The others deal with matters relating to the general problem of consciousness.

This problem of consciousness may for convenience be divided into two questions. The first question has been for me a constant preoccupation, in all that I have written and in all of my contacts of daily life. Does consciousness make a difference in human life and what difference? What happens when you or I become aware of something at work in us, or of something present in our environment, of which we were previously not aware? According to Kant this coming to consciousness means that we are now committed to the task of making our conduct the expression of impersonal law. My own view is the opposite, namely, that the coming to consciousness issues inevitably in the expression of personal aims. This is the view expressed in my *Individualism* (1911), which, as stated in the subtitle, was a study of "the significance of consciousness for social relations," and in my *Moral Philosophy* (1925), in which I set forth "the critical view of life." And this personal view of consciousness I oppose to the realistic view, as formulated by Professor Perry when he says that "the object or content of consciousness is any entity in so far as it is responded to by another entity in a specific manner exhibited by the reflex nervous system." That is to say, consciousness is a form of behavior, namely, the kind of behavior peculiar to a creature having a nervous system.

Now I grant that it sounds very matter-of-fact to talk about the nervous system; but as a matter of fact what is the kind of behavior peculiar to a creature with a human nervous system—what but simply all of human life? And then can you put this in terms of natural law? This question is dealt with directly in three of the essays in this volume, namely, in the essays on Moral Valuations and Economic Laws (X), on Birth-Control (XII), and on Advertising (IX), and it is the central question in three others, on Psycho-Analysis (XI), on realism in literature (VIII), and on Eucken (III). The essay on advertising I beg the reader not to take as a mere *jeu d'esprit;* it is offered here as a very exact formulation of what I had elaborated in two soberly academic essays on the associational psychology printed fifteen years before (in 1900) in *The Philosophical Review.*

But this first question, Does consciousness make a difference, and what difference? leads very quickly to a second and deeper question, Consciousness, what is it? This second question has been in various forms the focus of discussion in English and American philosophy for twenty-five years past, since it was first put by William James, in 1904, in an essay entitled "Does Consciousness Exist?" But, under many varieties of form, it has also, as I conceive, constituted the central issue of philosophy throughout the history of philosophy. Philosophy I have defined elsewhere as a study of the world in the light of the fact that the world is known. This is the fact (let us call it that) that causes all the trouble—all that trouble of the spirit which is philosophy. It is the attempt to account for this fact that gives rise to all of those questions that are peculiarly "philosophical." This fact of knowing puts a question even to those philosophies—such are most of the philosophies of today—which are rooted in biology. Granting that man is one among the other animals, yet what kind of a world must it be in which there are animals that know? And what is knowing?

Now the very first effect of giving attention to this fact of knowing, as manifested in Socrates and Plato, is to find ourselves no longer in one simply "natural" world but in two worlds, a natural world and also a spiritual world. To know the world is, it seems, to find yourself surveying the world independently from the point of view of another realm beyond. This dualism has persisted under various forms throughout the history of philosophy; in the problems of epistemology, or theory of knowledge, which have engrossed most of modern philosophy since Descartes and Locke, it reaches an acute stage. And it is this dualism which the contemporary philosophies of realism, or naturalism, are seeking to do away with; and to do away with it by treating knowing, or "consciousness"—what in general terms we call "the spirit"—as a simple natural fact, a space-and-time fact, one of the modes of human behavior, like digestion or walking, among others, not beyond nature but a part of nature, subject to natural law. This purpose, sufficiently comprehensive in its implications, embodies, I should say, the whole meaning of realism and naturalism.

The question, What is consciousness? is therefore an eternally critical question and never more alive than in the present. Of this question I will call this a volume of studies, in the pious hope that they are only sketches preliminary to something more rounded and complete. Meanwhile I hear men asking, in tones of deep perplexity, Consciousness? The problem of consciousness? But what is it all about? That is indeed precisely the most difficult part of the question to answer; and yet the most important part; perhaps the whole question. And so I think it may make the trend of these studies clearer—or at least add to the significance of their subject-matter—if I try to say in this opening essay what the question means to me as I see it now.

Consciousness, what is it? Traditionally the word suggests some sort of "inner" reality, "inner and spiritual." And it is important to remember that this is what the behaviorist has in mind when he denies the reality of consciousness. He does not deny that "consciousness" exists in the sense of a certain sort of human behavior—of the sort which, as illustrated for example in the activity of the vocal organs, is traditionally regarded as the "expression" of consciousness; though he thinks, very reasonably, that for this purpose the term "consciousness" is unfortunate, and he prefers to talk about "behavior." But as for the "inner" reality—well, there is no such reality, and any talk about consciousness in this sense is pure superstition. Professor Dewey relegates consciousness to the realm of the supernatural; and one of the behaviorist writers has described the progress of behaviorism, very neatly, as a matter of "giving up the ghost."

To me consciousness is a reality; possibly the only reality; but now what kind of a reality? How is it to be described? Now in the traditional and so-called "introspective" psychology, which is the special object of behavioristic attack, consciousness is conceived as a time-series of "inner" events, variously described as "ideas," "mental states," "images," set over against a space-time series of "outer" events to which they more or less correspond. These images—and this is the most significant term for them, since the whole idea is photographic, or, as Bergson puts it, cinematographic—are alleged to be revealed by "introspection." Falsely, I do not hesitate to say, because this so-called inner series, especially as reported by the introspectionist, is nothing but the outer series rewritten in other terms. Introspection as conducted by the psychologist never implies insight; the introspector is as purely an external observer of what passes, not in him but before him, as if he were reporting the behavior of the lower animals. Accordingly it becomes the task of the introspectionist to coordinate this series of inner events, or "consciousness," with the series of outer physical events; in other words, to "figure out" the relation of mind and body—with results something like the following.

I hear my telephone ring, and I decide to answer it; or at least I do answer it, consciously and willingly. Now we know that the telephone sends air-waves to the ear and that these are transformed into some sort of nerve-current which passes along the auditory nerve to the brain; and then, from the other side, we know that motor currents go out from the brain which issue in the several muscular movements involved in answering the telephone. But what happens in between—in the brain? In some way or the other it seems that the incoming and outgoing nerve-currents—things quite as definitely physical and localizable, let us remember, as the current in an electric wire—must be joined, and the circuit completed, by my idea, or intention, of answering the telephone. And then we face a situation long ago made clear by W. K. Clifford—once for all, it might seem—when he likened the case of two nerve-currents joined by an idea to that of a train of railway-cars linked, not by the customary iron couplings, but by the "sentiments of amity subsisting between the stoker and the guard."

Faced with this absurdity the behavioristic psychologists adopt the short and easy method of cancelling the "ideas," or of relegating the whole of the inner life, or of "consciousness," to the realm of superstition. And their philosophical colleagues, the realists, tell us that all that human experience ever reveals to us is real things, objects, never "ideas." Professor Dewey is constant in his iteration that all "experience" (which for him seems to mean anything in the universe) is "objective"; all of it one unbroken stream of events out there, so to speak, in a common, social world; none of it in here, in me, "in here" being an illusion, a superstition, a form of words without meaning. And in a series of papers of some years ago, occupied expressly with the difference between "the mind without" and "the mind within" Professor Perry declares that even introspection reveals only objects. Look within, if you like, and what do you find? Not ideas, but objects; not "consciousness," but a world.

With what the realists and behaviorists have to say about "ideas," or "images," I am fully in accord. If consciousness consists of such representative duplicates of real things then consciousness is indeed a myth. It seems that when we look for them they are nowhere to be found. Suppose I ask you to tell me what is a table and what is a chair, and how a table differs from a chair: the task will not be difficult. But suppose I then invite you to tell me how the *idea* of the table differs from the *idea* of the chair: what can you do but repeat your account of the difference between the table and chair? And how will you describe the difference between the table and the idea of the table except by telling me (say) how a table differs from a photograph of a table?

And this photographic representation, I will suggest, is what the introspective psychologist really has in mind when he talks about the series of "ideas." The psychologist's "introspection" is no report of personal experience. For him this immediate personal experience is only the naïve experience of one untrained in the method of introspection. What he reports is therefore not what he sees but what he knows he ought to see on the basis of a scientific theory of correspondence between the inner world and the outer, mainly photographic. The apparatus of "ideas" is then the very simple expression of a metaphorical picture-psychology which conceives the mind as a camera. Every attempt to form a "scientific" theory of mind consists, it seems, in the adoption of a metaphor derived from some one of the various apparatus for copying or reproducing and the substitution of this apparatus for the mind. For Aristotle and Locke the mind was a *tabula rasa;* for Woodbridge (in *The Realm of Mind*) the mind is a phonograph. The account of mind is then not an expression of your experience of mind or mine, but simply what follows from the *tabula rasa,* the phonograph, more commonly the camera, and preferably the moving-picture camera—things which, by the way, have no experience of any kind. It is the figure of the camera that resolves your mental life and mine into series of "mental images"; the camera that makes the image one thing, the object another, the image in here, in you or me, the object out there, in the world—all of which must be true if you and I are each a camera; and, what is more to my purpose, it is the camera that demands an exact correspondence between image and object. If the mind is a camera there can be nothing personal or individual about your experience of the world or mine.

And therefore I accept Professor Perry's account of what is given by "the mind within" so far as to say that, whatever else we find there, we find (not ideas, or images, but) objects, a world of real things not ourselves. In Chapter XV of my *Moral Philosophy* I have tried to show that there are no "mere ideas," no objectless ideas; that a mere idea is a mere word, or other sign, that has ceased to signify; and I cannot conceive of the merest dream which should not refer to a reality not the dreamer. But the question remains, What kind of a world? I have made a small beginning towards answering this question in the essay (XIII) entitled, "Consciousness, Where is It?" But I hope that even this may suggest that the world of consciousness is no world of impersonal "objects";

rather a world which like the paintings of a master reveals in every detail the personality of the conscious agent.

And so, What is consciousness? Well, if the question is not to beg the answer it should be put in other terms: how are we to understand the distinction between consciousness and its opposite—between consciousness, if you like, and behavior? My answer is that this is a distinction not of subject-matter but of point of view. And the distinction of point of view I have outlined in the second essay, on "The Agent and the Observer." This is the not unfamiliar distinction (if we recall *The Autocrat of the Breakfast Table*) between John as he is to himself and John as he is to his neighbor. John to himself—in other words, your personal experience of life and mine—this is the point of view that yields "consciousness": and John to his neighbor—this point of view yields simply "behavior." This distinction between how it *feels* to be a man, a dog, a child, a professor, business man, hod-carrier, and how it *looks*, to a disinterested observer, seems to me to be the concrete core and root of the whole metaphysical distinction between inner and outer, subjective and objective, spirit and matter, and the rest. Each point of view has its compelling logic: for John the agent his act is as inevitably the expression of a reason—that is, of himself—as for the disinterested observer it is inevitably the effect of a cause.

As thus conceived consciousness is not a name for one class of "entities" such as ideas, set over against another class described as objects, or things. It is not a name for any series of "events" in an order of time. Consciousness is superior to time. This is its distinguishing characteristic; and in this sense it may be said to oppose time with "eternity." I remember being in Toledo last summer, and as I remember I *am* in Toledo sitting for a moment in the shade of the church of San Juan de los Reyes and watching some small boys playing at a mimic bull-fight. I am now in Toledo even though I am also now here. You, the observer, seeing that Toledo is not now (from your point of view) before me, insist that I am not now in Toledo, but only just here. If you are an introspectionist you may grant me a mental image of Toledo; as a behaviorist you will admit only that (when I speak of Toledo) I am exhibiting vocal behavior. But for me your point of view is irrelevant. For me the only question is whether the scene, with the church and the children, is vividly before me—whether I am really seeing or only talking. If (and in so far as) it is before me, then I am in Toledo no matter what your calendar may say.

And thus, as Professor Perry says, the mind within surveys a world. But it is my world, I add; and the world *I* live in, to adapt a phrase from Fullerton; and in this sense a "subjective" world, but not in any sense which makes it more imaginal or less real than any other world. Accordingly, in terms of objects, or the world, consciousness may be described as the subjective world—rather the many subjective worlds as against the one objective world; your world and my world as against what Fullerton called "everybody's world"; or—and this is the way of stating the distinction that now appeals to me most—the many and various worlds of personal experience as against the one world of impersonal fact. And with these several expressions of the distinction before us I think we may now see what is involved in the question of James, Does consciousness exist? It is a way of asking whether these worlds of personal experience are real. The meaning of realism is that they are not real: the only real world is everybody's world; all "experience," as Professor Dewey puts it, is objective; your world and my world are only so many vocal expressions. As against this I stand for the idealistic view—or at least I cherish the idealistic suspicion—that only the worlds of personal experience are real; and that everybody's world is mainly a convention, a *modus vivendi* invented for purposes of conversation and of concerted action, a world in which none of us really lives.

This brings me to another way of stating the distinction involved in the conception of consciousness—a way of putting the distinction that possibly best suggests its comprehensive significance. The difference between the agent's view and the observer's, between personal experience and impersonal fact, is at the same time the difference between poetry—or, say, poetry and art—and science. Any finally hard statement of fact is a mathematical statement; and so far as the statement is not mathematical we have, in however small a measure, not science but poetry, not fact but experience. But this is by no means to confine the expression of consciousness to the "works of art" wrought by the professional painter or maker of verses—God forbid! It is fatal to any true understanding of art to think too exclusively of the professional artist. What I have in mind is Croce's pregnant saying that since we all talk we are all artists. We are artists, you and I, whenever we are striving to express a personal experience, whenever our talking is more than merely phonographic. Professional art is only the most deliberate attempt to achieve such expression. Yet even so, and precisely so, it seems to me that deliberate works of art afford the clearest indication of what is meant by "consciousness," and especially those highly individualistic manifestations in painting known as "modern art" in which the element of "art" is "writ large."

This suggestion, embodied in my *Moral Philosophy,* was lately again brought home to me by viewing for the second time the fine collection of modern paintings in the museum of The Barnes Foundation, at Merion, Pennsylvania, and by reading again Dr. Barnes on *The Art in Painting*. What is the idea underlying this modern painting? Positively, I will not here attempt to say; but negatively one point is clear. From Dr. Barnes I gather that nothing is more offensive to the modern painter than the purpose to be "photographic."

"Photographic"—this is precisely the conception of art that first occurs to the plain man not himself a painter when he sees a painter at work upon a portrait or a landscape. It is likewise the view of art expressed by Plato in the tenth book of *The Republic*. For Plato the artist is a copyist and nothing more, and his art is a matter not of inspiration but of technical skill. Of the "artist" as we think of him today, who takes himself and his work very seriously, Plato knows nothing. But according to Plato the object that the artist is copying, be it a vase, a horse, or a human form, this is again only a copy, and a very imperfect copy, of some eternal form which is the reality; and this reality is grasped, not by the artist but by the philosopher, who sees through the appearances which the common man accepts as reality. But the important point is (as it seems to me—for in any interpretation of Plato this will be the critical question) that the appeal to the philosopher is not an appeal to what may be called "personal" experience. No; according to Plato the philosopher is one who, like the scientist as conceived by modern science, has arrived at a point of view utterly impersonal; who therefore sees things, not as he *sees* them, and not as they merely "appear," to the common view, but just as they *are;* whose vision is then not "art," in the modern sense, and not merely beauty, but truth—mathematical truth, beautiful indeed but as mathematical truth is beautiful. The philosopher is concerned not with art but with knowledge.

Now this demand for a vision of things as they "are," i. e., for a revelation of something other than ourselves, for most of us as for Plato this is essential to the motive of knowledge. Art, we are inclined to think, is something different. But I believe that it is none the less implied in the motive of art. Some months ago I read Thomas Mann's novel, *Der Zauberberg,* in English *The Magic Mountain,* mainly because it had been recommended to me as a finished work of art. The novel is a story of life at a sanatorium for tuberculosis situated five thousand feet high at Davos, in Switzerland, and the point of it lies in presenting us with a world of persons who view life from a point of view totally different from that of the rest of us, down here in "Flatland," who can go about our daily tasks expecting to live out our threescore years and ten. In the course of the reading it occurred to me to ask whether the novelist had enjoyed any personal experience of the life he was writing about—whether possibly the point of view of tuberculosis had ever been his own. Or was the novel merely "a work of art"? And at once it seemed clear to me that a reader who was convinced that the story was merely "made up" would hardly care to go on with it. Surely it would then be a rather thin sort of "art." It seems indeed that art no less than knowledge must be a revelation of reality—even the art that depicts fairyland. And yet art must be an expression of personal experience. But knowledge too, I should say. The last state of him who aims at a point of view purely impersonal will be neither art nor knowledge but only "pure"—and empty—logic, or mathematics. How the personal experience can be also a revelation of reality, this it is that sets the "problem" both for art and for knowledge. Meanwhile we face the two motives.

And in the presence of the two modern art is distinctive in standing firmly for art as an expression of personal experience—a consideration which, as I have suggested, was foreign to the "classical" point of view. The realistic motive remains in the background but none the less present. For it seems that the painter is still tied to a subject (or to an object), however freely—in many modern pictures, distortingly—he may choose to deal with it. Even the most modern of pictures refuses to be a merely empty or irrelevant design. The painter is looking at something as he paints and he is painting what he sees; but what he sees, and what he seeks to communicate, is some vision of color and pattern peculiarly his own into which the object falls. And what he cares least to do is to convey any objective, or "photographic," "information" about the object. Photographic representation, he insists, is not art.

And of course it is not. As a way of putting the distinction between what is art and what is not art I can think of nothing better. Photographic representation would not be art were it the perfection of color-photography. Beauty is not a fact but an experience; and the camera, having no soul—no consciousness—experiences nothing. Then what does photography stand for? My answer is, Not for art but for science. Nothing in the world better illustrates what is meant by the objective point of view. The camera (or something of the same kind) is the only genuinely "disinterested observer." As such it becomes a standard authority for impersonal fact. Its testimony will be accepted in the courts, and by you or me, against any personal testimony whatever. Because it gives us only what every man sees when he is sane? Rather because its records form an integral part of a cause-and-effect system of impersonal fact which practical life compels us to recognize. Strictly speaking, no living being absorbed in the contemplation of an object could ever see the object as it is presented in a photographic record. And this not because the eye is optically less perfect than the camera, or more perfect, but because the camera is without a background of imagination, hence without experience. Imagination is necessary to see an object even in a photograph. Accordingly, for a just representation of an "idea" of the table—i. e., an impression or experience—as distinct from the real table, I should apply not to the psychologist with his method of introspection but to the painter of still life—this is just what "still life" is intended to express. And the difference between this and the photograph of the table will then be: consciousness.

A week before this writing, at a little island well out at sea off the Maine coast, I rose at two A. M. to join a fisherman friend, a native of the island, in a trip of forty miles in his boat to Portland. For me it was a strange and weird experience, though not quite new; but I had not seen the sun rise in seventeen years. For the fisherman the early hour, the darkness, and the lonely expanse of sea were ordinary matters of fact. It was not the hour for conversation, and as we rolled along over the swell of a comfortable sea it amused me much to reflect upon the difference between our two worlds of experience and upon the very limited worldly experience, as measured from the world of my friend the fisherman, of one who in a lifetime had seen the sun rise hardly a dozen times. Which of our two worlds could be called the objective world? In fact neither. The objective world lay convenient for reference on top of the engine-box, in the form of the government's chart showing lights, buoys, and soundings. Experientially it bore little resemblance either to the fisherman's world or to mine or to any other world of living experience.

Practical life compels us to assume that we all live in the same world but it marks a lack of self-consciousness if we believe it to be true. This repeats what I have said in a chapter in my *Moral Philosophy* on "The Beauty of Knowledge," occupied mainly with the æsthetic quality of simple perception. It is this æsthetic quality of all experience—experience as distinguished from fact—that I find so strikingly suggested in the modern paintings. The impression may be, must be, exaggerated. And the painting may be true or false; it may stand for a genuine experience or only for a whimsical bit of design invented for the purpose of making a picture. But I think that one cannot long contemplate these or any other products of art without asking oneself the searching question, when reporting a personal experience, Does this express what I really see or only what I ought to see—as laid down on the chart of everybody's world?

If you ask a man what he thinks about this or that, how often do you learn what he really thinks, how often what he conceives to be logically respectable, and what he will stand for? It is so much easier and more practical to adopt the coinage of everybody's world.

Such then is the distinction between fact and experience. The world of impersonal fact is one, uniform, and systematic; the worlds of personal experience, largely hidden from one another and always difficult to communicate, are as many and various, as unique and peculiar, as the many personal agents to whom they belong. These are the worlds of "consciousness"; and the question about consciousness as I see it is this: are these worlds of personal experience real? Is there an agent's view as distinct from a peculiarity of animal behavior? Or, as Mr. Dewey holds, is the whole of the so-called "inner" life a pure superstition?

II

THE AGENT AND THE OBSERVER

I

In comparing the various modes of viewing human action and experience there is no contrast more striking than that furnished by viewing a situation from within as agent and viewing it from without as observer. There is no greater difference than the difference between the way a thing feels when you do it yourself and the way it looks when you see it done by another; between having an experience and contemplating the expression of such an experience. This contrast of point of view will serve as the basis, in this essay, for a mainly descriptive analysis of the distinction between subject and object.

The current modes of stating this distinction are very largely formal. Suppose a pack of cards to represent so many items of experience; the various distinctions of subjective and objective may then be indicated by supposing the cards to be sorted into two groups (not necessarily mutually exclusive) according to certain rules. One rule separates the immediate from the inferred; another the individual and peculiar from the common and universal; a third marks off a mathematically coherent group as objective and scientific, leaving "subjective" stand for the residuum. But none of these distinctions seems to effect any important transformation in the nature of the terms distinguished; whether a term falls within the subjective or objective group is treated as a mere accident of position involving no difference of quality; whereas, as I aim to show, the distinction involves a difference of quality and interpretation which is world-wide and is of fundamental significance for both psychology and metaphysics.

Even in the more overt bodily actions there is a surprising difference between how an action looks and how it feels. Things simple in the observing are unaccountably hard in the doing. The successful strokes of another in tennis or billiards seem clearly a matter of course, his failures stupid, and a good game, so easy and graceful in the observing, is full of stress and strain in the playing. Take a difficult sonata of Beethoven; I can hardly conceive that what seems so easy and natural for the virtuoso is utterly impossible for myself, especially when my impression of the sonata is vivid and its meaning seems clear. Now in these more overt activities the ground of the contrast is to a degree simple. The point of view of the doer is different in a spatial sense from the observer's. The agent views the situation literally "from the inside" of his body—that is, he has muscular as well as visual information of his movement. We shall ask presently whether this difference is not of vital significance for the general peculiarity of the agent's view. But the point to be noted at present is that in contrast to the observer the agent *knows what he is doing*—i. e., he knows the purpose of his action. For him the present act is a term in a continuous process in which it is blended with past terms leading up to it and with anticipations of future acts to follow, the whole pointing in a more or less definite direction whose signs are mostly hidden from the observer.

As we pass from relatively overt acts to more complex attitudes the contrast of point of view becomes more striking. Sidgwick has noted that while we are confident that our own acts are the expression of choice (and more confident at the moment of choice) we are disposed to view our neighbor's acts as externally determined. My life-insurance policy is a mark of judgment; my neighbor's is the result of the persistence of the company's agent. This attitude is typical of all of our judgments of self and of others. My neighbor's toothache is never so bad as my own; his grief cannot be so real; nor his children so essentially interesting. His friends have not the same intelligence, substance and dignity of character. His opinions are never so obviously sensible. I cannot admit that his appreciation of Beethoven is so thoroughly nice and comprehensive (note the jealousy that guards the musical self). And above all, where my love-making is a matter so deeply serious his cannot fail to be somewhat ridiculous. Altogether I find it difficult to credit him with the same richness of inner life that I find in myself or to believe that his acts have an equal significance.

Narrowly speaking, I can never fully appreciate what it is to be any one but myself. Though I know how it feels to be a man I wonder somewhat how it would feel to be a stout man, or a tall man, or a man of great strength—as I wonder how it would feel to be president. It is still harder to imagine the inner life of a dog, harder again that of the snail; and how it would seem to be a watch, a steam-engine, or a water-fall, I can hardly even wonder.

Yet it is relevant to note that even the last question is not without meaning. The refusal of modern thought to consider an "inner" side for inorganic activities is based less upon rigid logic than upon practical incredulity. It represents the convenience of a simplified science, whose convenience would perhaps be better promoted if the inner side of the world could be dismissed altogether. It is a question, however, whether the very meaning of scientific inquiry into the ultimate nature—the "inner constitution,"—of physical things is not to arrive at their "inner" nature in just the subjective sense now before us. A scientist may claim that by "inner" he means only the inside in a sense purely spatial. But why should the inside be so significant? Because, one may say, by increasingly minute mechanical analysis he hopes finally to arrive at terms whose relations and interactions are not merely a matter of mechanical fact, but at the same time logically necessary and self-evident—in other words, necessary from the standpoint of conception and motive. But this, I suggest, would be equivalent to understanding how one would feel obliged to act if one were the object in question, and how it would feel to be that object.

The agent's view may thus conceivably be extended to cover any action whatever. On the other hand, in its most intensive meaning it is restricted not merely to myself and my action generally but to myself in the moment of action. For between my view of my action in the moment of action and my view of my action as past there are differences of the same kind, varying according to remoteness in time or feeling, as lie between my view of my own action and my view of my neighbor's; and I never completely know how it feels to do a thing except while I am doing it. Here indeed we have the ground of Kant's distinction between the ego as subject and the ego as object. To be the agent of an experience or activity and to contemplate your own experience or activity, when necessarily it is in some degree past, are radically different; the way an action feels is never quite the way it looks even to oneself; and so far as the activity is merely looked at it is looked at more or less in the same way and presents the same appearance as the activities of other persons. This point is of great importance for the determination of what we mean by introspection; for it may be said of the whole kaleidoscopic show of mental states exhibited as "the results of introspection" by the usual associational-empirical psychology, that it rests less upon a genuinely introspective view than upon the relatively external view of the agent contemplating his own action as observer. The "mental state" is exhibited, not as it is felt by the agent when it occurs, at most as it appears to him sometime later, but rather as it ought to appear from the standpoint of a science of psychology based upon the observer's view.

And so as my action recedes into the past I tend to feel about it more or less as I should feel about the action of another person. I begin to suspect that my taking out a life-insurance policy a year ago was not unrelated to the persuasiveness of the company's agent. I am ready to join in the cynical or humorous view of my youthful aspirations; what was then tragedy is now more or less comic. And what I wrote a few years ago seems now more or less insipid, though what I now write seems none the less significant. The experiences that I recall of early childhood seem almost to belong to some one else. Yet this is only the difference, written large, which lies between every act of mine when in the doing and when, as it passes into retrospect, I attempt to fix and hold it in idea.

And if again we extend our conception of the agent to cover now not merely the whole individual but a whole generation or historical period, we have the same differences repeated in the ways in which the life of the period appears to those concerned in it and to the historian who describes it. The historian necessarily interprets the life of a period in the light of later results, but it is always a question how far these results entered as purposes into the consciousness of the time, and how far we, with the later events in mind, can ever reconstruct its actual point of view. Inevitably we think of "when the world was young," as if it had ever been anything but old and modern to those living it. We can hardly realize a point of view from which Locke's "dear old book," as James so fittingly calls it, was modern thought, or from which its language and attitude were anything but quaint and naïve. And above all we tend to think of nearly all historical periods as periods either of fixed conditions, or of steady progression, in contrast to which the present is a period of transition and unrest; whereas it may be asked whether every period is not a period of transition and unrest to those who live in it, and whether indeed, if we accept the present theory of consciousness, it is not necessarily so.

II

From this general sketch of the two views I proceed to a more detailed analysis of their differences, and for a standing illustration let us suppose that two persons, who are to play the part of agent and observer, are in the agent's office or study; the agent's telephone rings and he responds to the signal. Our first question is, why does he respond? How are we to describe the connection between signal and response.

Let us put the question to the observer first. He will state the relation as one of stimulus and reaction—in other words, of cause and effect. If, remembering that both signal and response were contemporaneous with other events and conditions, we ask why this particular effect was the effect of this particular cause, he will reply, following Mill and Jevons, that in a multitude of similar observations they are related as sole invariable antecedent and consequent. If we ask for any causal terms lying between signal and response he will refer us to the nervous system and affirm that between the points where the vibrations of sound meet the endings of the auditory nerve and where the motor nerves finally act upon the muscles there is a continuous neural structure and an unbroken chain of neural causes. For the source of his information he will refer us to anatomical observations made upon the nervous system of other agents. And if we object that such observations have not succeeded in completing the chain of causes he will reply that nevertheless the terms to be supplied must be of the same mechanical kind as those observed. And herein lies the peculiarity of the observer's view. The observer knows nothing of consciousness as such, since from his position as observer the conscious process is forever inaccessible. If for any reason he introduces conscious terms into his causal series they must first be made over into "mental pictures" or "compounds" and disfigured, so to speak, to fit the mechanical and causal categories; so that, as a matter of fact, he is not describing consciousness but only such mechanical objects as pictures and compounds. And thus, however he may name his terms, his formulation of the relation of signal and response is a mechanical formulation in which the relation is conceived to be one of cause and effect.

But for the agent this mode of viewing the relation is quite irrelevant. The agent would never say, "I was *caused* to take down the receiver by the ringing of the bell." No one ever says of himself that he was caused to perform an act which was within his power of choice—that like an instrument of wood and iron he was simply operated upon by forces from without. To say this is to write yourself down a fool; and you will avoid this admission as far as possible, not merely because it is unwelcome and degrading, but because from your point of view as agent it is in the last analysis incredible. Conceiving yourself as agent the only conceivable ground of action is, never a cause, but a *reason*. Other men may be caused to act but one's own action can be conceived only as the expression of some conception of value. Even the victim of a post-hypnotic suggestion feels bound to explain as an expression of judgment what for the observer he was clearly, so to speak, wound up to do. And so the agent of our illustration would reply to this effect, "I answered the telephone-call because I expected to hear a message of some interest to me." He might admit that no expectation of the sort was clearly defined but he would insist that apart from some notion of value he could not have acted at all.

Accordingly, where the observer looks for causes the agent expects to find reasons. What the observer views as a relation of cause and effect is for the agent a relation of ground and consequence. For the observer the moving term is a blind force, for the agent it is a conception of value. In a word, the observer's view is mechanical, the agent's is logical and teleological.

Passing from doing to knowing, our second question is, How does the agent know that the telephone-bell really rang? Now the observer has of course no direct access to the agent's knowing, but he has what for him stands for the same thing, namely, the agent's reaction so far as it is externally accessible, which includes not only the grosser movements of walking to his telephone, etc., but what is more significant for his knowing, his speech, gesture and facial expression. Accordingly, for the observer the second question is practically identical with the first and his answer will be the same; as the agent's action is a matter of cause and effect so is his knowledge; the stimulus as the cause of his reaction is the cause also of his knowing.

But now for the agent. In answering the question he of course is referring directly to his knowing, i. e., to his conscious process. And he cannot say, "I was caused to hear the bell by the ringing of the bell"; for however you may analyze his situation he does not have both the hearing and the external ringing. To him the hearing and the ringing are one and the same; if he distinguishes them the distinction is his own act; in any case they are not so separated in time or in place that one may stand as the cause of the other. And if he had only the hearing (or the ringing) as presented at the time of its occurrence he could not say positively whether the bell rang or only seemed to ring. His answer will accordingly be the statement of a conclusion. He will say perhaps, "When I answered the telephone, I found so-and-so waiting to speak to me; and thus I had *reason to believe* that the bell really rang." In other words, his belief as well as his action rests upon reasons rather than causes. From his point of view it is as incomprehensible that he should be caused to believe as that he should be caused to choose. Whatever he believes must in the last analysis be the expression of a "will to believe"; it must be what he can approve and verify as reasonable, intelligible and consistent. Even when he is "compelled to believe" what is relatively unsatisfying it is only because, so far as he can see, any alternative belief would involve him in a greater and more unwelcome absurdity. The observer as observer is confronted with brute facts which compel his acceptance; for the agent whatever is accepted must also be in some sense chosen.

Let us carry the inquiry a step further. We have seen that the agent's logical process presupposes that for everything there must be a reason. A third question then arises, Upon what does this principle rest? Does it in the last analysis arise from the nature and point of view of the agent or is it simply the result of the environment in which he is placed?

The latter is the observer's view. For him the only question to be asked about this or any belief is one of origin and history. Now the observer has before him the vast expanse of nature with its exhibition of regularity and order. He sees individual men in contact with nature and he notes in their behavior a regularity and order corresponding to that of nature, and corresponding ever more perfectly as time goes on. Accordingly, just as the individual stimulus is the cause of its reaction so is the regularity of nature the cause of the corresponding regularity of human behavior. As a psychologist the observer will express this in terms of the law of association, according to which the order of experience tends to become fixed, through the formation of habit, in the order of thought. In strictly external terms this means that the order of sense-stimuli determines the order of reactions. The principle that everything must have a cause is then simply the expression of one of the most ingrained of these habits. That it *must* have a cause means only that the habit is unbreakable, the association is indissoluble—not that the contrary is logically inconceivable, but simply that any other mode of thought, or rather any other mode of responding to stimuli is mechanically impossible.

The agent, however, is not confronted with the broad expanse of nature but only with so much of it as can reach his sense-organs. And as Kant pointed out, there is a radical difference between the "subjective order of apprehension," the order in which facts are received, and the "objective order of apperception," or the order in which they are finally disposed as details of an objective world. Where the observer has before him a relatively complete series of causes and effects, which he either observes himself or accepts on the authority of other observers, the experience of the agent is highly fragmentary. He has causes without effects and effects without causes; and causes after effects and effects before causes. An objective space-order may be for him a time-order. Moreover, even if his experiences were as a matter of fact a faithful and complete copy of the external order it is not to be seen how, from this cause alone, he should be impressed with the order of cause and effect; for individual causal series are not presented separately but mingled together in one vast complex of experiences. And granting that he had succeeded in disentangling the individual series, and had located every detail as a member of such a series, he is still without a basis for affirming that everything *must* have a cause. For to the agent this means necessarily that the contrary is inconceivable. And this means again, not merely that he is unable to construct the contrary in thought, but rather that he has investigated the conditions of such construction and finds that they involve a positive self-contradiction. Now because two terms are found always together there is no contradiction in conceiving that they may exist apart; and that I have always thought of them together furnishes no ground for supposing that they necessarily belong together. A habit or association, however ingrained, falls always short of a logical necessity; and for the agent nothing is really indissoluble except that whose dissolution involves a self-contradiction.

Accordingly, for a subjective interpretation of the necessity of the causal relation, we must refer once more to reasons as opposed to causes. And here it is to be noted that we are speaking of the ground of the assumption rather than of its history; and moreover, that the relation designated by the assumption is intended to be a relation of ground and consequence rather than of cause and effect—the subjective expression of the law of cause and effect is the principle of sufficient reason. Now when I say that for every event there must be a reason and that the contrary is inconceivable it is because there must be a reason for every action of my own. For me as a conscious agent a ground or reason furnishes the only conceivable basis or motive for action, the only basis upon which I can render any action intelligible, and therefore the only basis which I can admit to be possible or real. Accordingly, when I undertake to say how a body must be conceived to act what I do is to put myself in its place and say how I should act, and should feel in reason obliged to act, if I were that body. Such, for example, is the meaning, for me, of Newton's first law, which declares, roughly speaking, that a body at rest must remain at rest until moved and a body in motion must move until stopped. Judging the matter from my own standpoint, as of one who knows directly what it is to move or to stop moving, I declare it inconceivable, and in contradiction to the nature of a motive being, that it should move or stop or make any change whatever without a sufficient reason for doing so, and therefore I affirm that action without intelligible ground must be forever impossible and unreal, and that the real world must be a world of reason and motive.

Thus the agent's view is, if you like, essentially anthropomorphic, and it is not merely anthropomorphic but, to use Spencer's word, automorphic. For it conceives the world not merely in the form of reason, abstractly considered, but in the form of that individual purpose which gives body and concrete meaning to one's judgments of what is reasonable and of value. Not only must the real world be a rational world, no world can be finally and satisfactorily rational which does not justify my individual existence and my individual ideals from the standpoint of the ideals themselves. To this motive must be ascribed the extraordinary vitality (from any objective standpoint) of the belief in a future life. In the broad daylight of scientific observation and common sense belief in a future life can be explained only as a relic of superstition, but to the inner personal consciousness it expresses a motive profoundly logical, which survives as a logical determinant after the substance of the belief has been lost, and compels attention from those who deny that it is logically valid. For it will be noted that, even where the personal motive is formally rejected, the argument against future life rarely fails to include the *ad hominem* argument to show either that individual aims are satisfied within the present life or that from their own standpoint a continuance of existence is not really desirable.

III

I shall endeavor now to illustrate by a few brief examples, introduced somewhat parenthetically, the importance of our distinction for detailed psychological description.

1. Are sensations to be described as the elementary material of thought, or as its final product? This subject has been involved in great confusion. Professor James has suggested that the status of sensation will differ according as our view is analytical (the agent's) or physiological (the observer's); and the confusion of these has been neatly characterized by James himself as the psychologist's fallacy. Yet I think that he himself is guilty of this fallacy when he presently tells us that sensations are first things *in consciousness*. For the only standpoint from which sensations can be described as prior or elementary is that of the observer. From the observer's view the stimulus acts *first* upon the sense-organs and the nerve-current *then* passes along the sensory-nerve to the brain; at the same time the several kinds of stimuli furnished by the one object *first* excite separate sense-organs, the currents from which are then combined in the brain. But it is not so for the agent. The sense qualities of his object do not first appear separately and then unite to form an object. It is even inconceivable how a quality could be apprehended except as a quality of an object. For the agent sense-quality and object are the final and coördinate

product of a process of analysis and definition.

2. Hence, for the agent, sense-qualities and thought-qualities (e. g., the mechanical structure of a watch and its value or its accuracy) are equally original and ultimate. The broad distinction between sensation and thought is an observer's distinction. And the axiom of *nihil est in intellectu, etc.* in which this distinction is embodied, namely, that there is nothing in the intellect which was not first in the senses—this is far from axiomatic from the point of view of the agent. For the conscious agent the world is bound to be ultimately one, its various aspects and qualities mutually related. Nay, it is just this necessity of thought, or of consciousness, that leads us to speak of "the world" or of "the universe" and to look for law and order, and for significance, rather than content ourselves with a formless flux of indefinite "events." Hence the agent is bound to assume that with sufficiently acute analysis any feature of reality may be derived from any other, and that a man born blind may thus be conceived to obtain from hearing and touch, not merely knowledge about, but acquaintance with, the nature of color.

3. I have noted that for the agent knowledge is necessarily a question of internal coherence. But for the observer it is of equal necessity a question

of correspondence between the object and the agent's idea, or the reactions supposed to express his idea. For where the agent has only his process of knowledge, by which for him the object and the idea of it are coördinately distinguished and determined, the observer has the object before him as a fixed *datum* wholly independent of the agent's recognition of it. Hence the only question for the observer is whether the agent's recognition corresponds in the normal way to the characteristics of the object.

4. Again, is the perception of the object followed by the reaction to it or are the two simultaneous? It will be remembered that James's scheme of idea-motor action, which furnishes the basis for his theory of emotion, consists on the subjective side of an idea (or perception of an object) followed by a feeling of movement. Dewey has pointed out that this relation of succession is the product of reflection. It is also, however, as I should prefer to say, the direct consequence of the observer's view. The sequence of stimulus and reaction which exists only for the observer has been simply transferred to the consciousness of the agent. There is no such sequence for the agent. He does not, to use James's illustration, first perceive the bear as an indifferent object and then by run-

ning away appraise him as dangerous. On the contrary, the dangerous quality is necessary to the apprehension of the bear as a bear, and the act of running is simply one of a group of simultaneous activities, including the adjustment of the sense-organs, etc., in the coördination of which the agent defines his object.

And here I may remark that James's whole account of emotion suffers from a failure to keep the agent's and observer's views distinct and thus to adhere consistently to one view or the other. After the process of emotion has been described in purely mechanical fashion as a conflict of instincts, i. e., of preformed neural tendencies, initiated by environmental changes, for which the human soul serves only as a theatre of action, one is somewhat astonished to learn that the view is not to be called materialistic; whereas, if the conflict had been described from the beginning as it would be interpreted by the agent, as the value-side of the process of comparison in forming a decision, the teleological intentions of the theory of emotion would have been perfectly clear.

IV

So far the agent and observer have been presented as living in different worlds and speaking wholly foreign tongues. The problem of translating them, each into the other, is the traditional problem of mind and body, of which no solution will be attempted here. My interest lies rather in discovering if possible what in the last analysis such a problem would mean. I have pointed out that among other differences the two views differ more or less in sensory content. It will then be worth raising the question how far such differences are related to the differences of logic and point of view.

We have seen that, in the more overt bodily actions at least, the point of view of the agent is different from that of the observer in a spatial sense: it seems that the agent views his action literally from the inside of his body. This difference involves in itself a difference of sense-content, which common sense records by speaking of how an action *looks* to another, but of how it *feels* to oneself. And this points to the fact that our view of the acts of our neighbors is predominantly visual. It is not exclusively so, but it is more so to the extent that the neighbor is a distant neighbor. Bodily contact, even to the extent of shaking hands, is the mark of a certain intimacy. And in any case it is clear that I can have no direct experience of how my neighbor's act feels to him in terms of muscular and organic sensation. Now, as James has suggested, every stimulus from without—as when I hear the clock strike—initiates a movement which reverberates throughout the body, causing changes in probably every part of the system. Of this incalculable mass of change probably every detail is represented, however obscurely, in what is called "the feeling-tone" of the agent; but only a few of these details are accessible to the view of the observer. My sensory experience of another's act as compared with his own sensory experience, the look as compared with the feel, is therefore extremely limited.

If then we assume that every change of thought and will is the parallel of some organic movement it may well be that in these items of experience which are hidden from the observer we shall find a basis for the logical peculiarities of the agent's view; in particular for his interpretation of his own act as rational and purposive. For at any moment he will be aware of beginnings of movement not yet developed into acts sufficiently gross to be externally evident. The observer may note a "tendency," and from what he has seen infer what is to come. But for him the tendency is inferential: for the agent it is a matter of actual sensory experience. From the standpoint of organic experience, or of bodily feeling, it is not easy so to separate the present from the past or the future from the present as to make of one's experience a "series" of temporally distinct and separate "events." From this point of view consciousness is not a series but a stream. The past is reverberating in the present, in which again the future has already begun. It may be that further analysis will dispose of anything so temporal in character as a stream. Meanwhile it seems that for the agent his act is never merely a fact—a *fait accompli*—but a movement, a striving, a purpose, a matter not of cause but of reason, in the last analysis personal.

On the other hand it seems that the implications of visual experience are quite clearly impersonal and mechanical. For the essence of any mechanical interpretation of an act is that the different aspects or qualities are not merely distinguished but marked off as separate parts, each lying, so to speak, wholly within its own spatial or temporal skin. And there is no region of sense experience where this is so completely possible as in the sense of sight. Any mechanical description of an object becomes in the last analysis geometrical, i. e., visual. Vision is the source of all that is distinctively "intellectual." An "intellectualist" is a cold-blooded person, anæsthetic it seems to organic experience, who exclusively *sees;* and his demand for logical "clearness" is a demand for visual clearness. Logical necessity reduces to geometrical necessity, to be tested by Euler's circles. If Socrates is a man and all men are mortal then Socrates must be mortal. Why? Because when one circle (Socrates) lies within a second circle (men) and this again within a third circle (mortals) then the first circle must lie within the third.

It is vision again that forms the sensory basis of all exact science. All instruments of measurement, of which the thermometer is a typical illustration, imply an appeal from the several other senses to the sense of sight. And to make any statement of fact indisputably clear we resort to diagrams or graphs. But not merely to make it clear. For some of the lower animals I suspect that the sense of sight is unimportant. The rabbit's eyes are so situated that he can hardly be conceived to enjoy stereoscopic vision. Among the human senses it seems that vision is peculiar in presenting us with many objects all at once (*totum simul*), and also systematically related. The blind man entering a strange room must first touch the objects one by one and then put them all together. To the man who sees they are presented all at once and each in its own place. From all of this we may readily understand why seeing should be so commonly regarded as the equivalent of knowing.

To these considerations we must add the fact that each view of the act is bounded by an inevitable narrowness of attention. This means that each is in its own way selective and that neither is finally comprehensive. It is sometimes said, on behalf of the expert psychologist, the psycho-analyst, or of those perhaps who pride themselves upon a special understanding of "human nature," that other persons are in a position to know us better than we know ourselves. This, it may be said, is true only superficially; that is to say, visually. The agent is likely to be absorbed, at times he will be overwhelmed, by the fulness of his experience of the moment; in the presence of which it is not easy for him to see his life from the point of view of other moments. A tragic bereavement may lead him to think that for him life can never again be worth living; or in the ardor of a present love he may doubt that he has ever really loved before. And yet it is only in the light of those other moments of life that he can see what this moment really means or what he most truly means by his life as a whole. Now this placing of the present act side by side with one's acts of the past and with the acts of other persons, in what is then described as a comparative point of view, is peculiarly the task undertaken by the disinterested observer.

Only, what he derives from it is not meaning but law. There is nothing in my experience, he tells me, which is peculiarly personal. All wounds are healed with the passage of time and lovers' vows are forgotten. It will not be different with me. But this impersonally simple statement of the case is facilitated by the little that he sees of the act. The basis of his interpretation is not any experience of the act as a whole but mainly the visual aspect. Accordingly we may say that while the observer has the advantage of a greater breadth of view the agent enjoys a greater depth of experience.

And this suggests that any view of human life must be so far false which fails to do justice to both. Consider, for example, the matter of sexual attraction. To the observer this is simply the antecedent cause of reproduction; to the young lover nothing could as a rule be more remote from his purpose or possibly more abhorrent. Yet subsequent reflection will probably convince him that this feature, both in its immediate and its remote aspects, was really indispensable to his purpose, and that he could hardly have made a choice from which it had been expressly included. Here then the external view serves to complete and to correct the agent's definition of his purpose. On the other hand the external view misses most of the factors necessary to account for the concrete choice. To the observer the case in hand is one of simple sexual attraction. He compares it with the sexual behavior of the lower animals, already conceived by him too simply and impersonally, and recognizes no important difference. The complex sympathies, whose correlation represents to those concerned the fulfilment of highly personal ends—these are hidden from the observer and they cannot easily be included in a view which will be definite, systematic and scientific. They belong rather to the sympathetic insight which finds expression in the work of the poet and novelist; yet in the last analysis they must also be included in any deterministic account of the concrete choice.

From this it will appear that each view is in its way partial, inadequate, and abstract. But in particular it will be worth noting how much of the content of human life is excluded from the view of the observer, and how this exclusion involves also a distortion. The observer of an act sees only a stimulus followed by a reaction, which he can interpret only as a sequence of cause and effect. But the agent has before him a more or less extended process of debate, including the alternatives rejected as well as that finally adopted, and involving their comparison and valuation. He is thus, by the very nature of the situation presented by his broader view, justified in regarding his act as the expression of choice. Likewise he is in a measure justified even in the undue emphasis placed upon his own view. He regards his own children, his own friends, his own appreciations and opinions, as more significant than those of others, but he has the advantage of a more intimate acquaintance. His own views are involved in a network of subtle suggestion and cross-suggestion of which he is conscious as no one else can be. His intercourse with friends reveals complexities of character which are hidden from their more remote acquaintances. He errs only in assuming that his own are exceptional. So far then from discounting the agent's view because of its individual emphasis, we may rather assume that all agents' views are likely to be true. It is possible that the great mass of "men on the street," so desperately uninteresting in the crowd, might all turn out to be significant personalities if only they could be studied individually. And when we attempt to conceive the result of a possible unified total of such individual views, and place over against it the total result of observer's views, it is at once suggested that the observer's view is truly, as it is instinctively felt to be, a superficial view, however necessarily so, and that its superficiality involves a rather serious misinterpretation of the subject matter. And this suggestion is strengthened when we remember, not only that the personal life suffers abstraction at the hands of the observer, but that it suffers a similar abstraction in the agent's present view of his life as a whole—that, indeed, no individual life has ever been viewed as a fully concrete unity even by the agent himself.

The results of such abstraction are to be seen in the various conceptions of humanity offered by the social sciences, so called. There is the economic man of classical economics whose only activity is to buy cheap and sell dear; the hedonistic man of scientific ethics who sums up pleasures with the impersonality and indifference of an adding machine; the reproductive man of scientific anthropology who perpetuates his kind regardless of what kind he may perpetuate; and finally the associational man of ultra-scientific psychology whose activity is confined to combining mental elements into compounds, and whose structure is a vague compound of metaphors, including the cinematograph and the cash-register. These conceptions have doubtless an important function as instruments of analysis, but as pictures of human life they are neither living nor human. And it is no wonder that to the popular mind the science of psychology represents the negation of all that is humanly interesting. Its pictures of human life bear a general resemblance to the shades of Greek mythology. Psychologically they are largely visual abstractions constructed by an observer who sees without feeling, and to whom, therefore, human activity presents itself as a series of phantom-like images.

III

EUCKEN'S PHILOSOPHY OF LIFE

I

THE sudden and widespread popularity of Rudolph Eucken's philosophy in England and America;[1] the personal impressiveness of the man; the fact that he is hailed everywhere, by the broader sort of theologians, by the more "tender-minded" of idealistic philosophers, and by all who are suffering from spiritual unrest, as a new savior of religion and the soul—all these combine to make Eucken and his philosophy an object of special interest even to those who, like the present writer, have little sympathy for his mode of philosophizing. Eucken is now in his sixty-seventh year. Although his first work of importance appeared in 1878, his larger popularity is a matter of five or ten years past. His introduction to English readers dates mainly from 1909, when his best work, *Lebensanschauungen der grossen Denker,* was translated under the (somewhat misleading) title of *The*

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[1] This was written in 1912.

Problem of Human Life. In 1908 he was awarded the Nobel Prize of Literature, "for the most remarkable literary work of an idealistic nature." In the past four or five years translations, new editions, and new works, all upon the theme of the spiritual life, have appeared with bewildering rapidity, yet apparently not too rapidly for the demand. His translators, who, with possibly one exception, are his former pupils, all bear witness to his power of inspiring a warmly personal and at the same time reverential devotion. For them he is the prophet of a new religion, whose message will be incomprehensible except as it reveals the man. And they are doubtless specially justified in warning us that the impression to be derived from a translation will be necessarily inadequate.

For clearly one of the secrets of Eucken's influence, at least in his later works, is a certain impressive eloquence, an impressiveness peculiarly German, which is hardly reproduced in English. And it is particularly unfortunate that the translation which is least successful in this respect, though generally faithful, is that of *Life's Basis and Life's Ideal* (another misleading change of title—the original title would be *The Fundamentals of a New View of Life*), which we must regard as now the most authoritative statement of his point of view.

Reading the translation alone, one would dismiss the work as doubtless full of edification, but colorless, unsubstantial, and intolerably monotonous. Yet the German is, if anything, rather vivid and rich, full of striking figures and of sentences that are rhythmical and well-formed. Indeed it is the kind of style, when coupled with the constant suggestion of a revelation just beyond, to keep the reader turning page after page. Nor is it all a matter of style. Unquestionably Eucken has sounded the depths of our personal, let us say, our religious experience, and has meditated deeply upon the larger aspects of life; and if he were writing verse we should marvel at the depth and truth of his philosophical reflections.

But since he is writing prose we marvel rather at the absence of reasoned and constructive argument. I will not say that there is no basis of idea. Rather there is one idea, indeed a pregnant idea, which, however, remains ever pregnant, ever in process of gestation—the independence of the spiritual life, *die Selbständigkeit des Geisteslebens.* Notwithstanding the systematic development announced in his tables of contents, a limited range of variations upon this theme constitutes (if we omit the historical works) the nearly unchanging content of every chapter, every volume, and almost of every page. In the series of works entitled *The Unity of the Spiritual Life, The Struggle for a Spiritual Content of Life, Life's Basis and Life's Ideal,* and *The Meaning and Value of Life* (the last two have virtually identical tables of contents) it would be difficult to find many later passages which give the impression of saying anything new. All that we can make out is a gradual transition from a "personalistic" to an absolutistic point of view. We may say nearly the same if we add to the series *The Life of the Spirit* and the two books on the philosophy of religion. Everywhere we are greeted with the same message: modern culture is alien to spiritual ideals; the regeneration of life demands a complete repudiation of all existing philosophies and a deepening of the inner and spiritual. In all this he rarely or never descends to the level of concrete illustration or to the consideration of an existing social or ethical problem. Yet he remains everywhere eloquent and impressive. Altogether the impression left by a few hundred pages of the spiritual life is distinctly Wagnerian. One is tempted to think of a *Liebestod* very long extended. Yet I doubt if the *Liebestod* is without logical progression; and when Tristan dies he is dead. The spiritual life may always begin another volume.

II

Eucken's philosophy is a *Lebensanschauung,* or *Lebenssystem,* that is to say, not a system of metaphysics or a cosmology, but a view of life; and for him all other philosophies are so many life-systems. His own idea of life may be approached through his analysis of existing systems, in which, it may be noted, he is at his best. Among the older systems he has the highest regard for Christianity, which alone, he thinks, contains the elements of absolute religion. But Christianity now needs to be reconstructed in the light of modern thought. It must separate the substance of religion from its historical accidents, adopt a more virile tone, and emphasize the joyousness of the Christian life. There is no hope in modern idealism; this is an empty intellectualism which issues only in a vague and meaningless panpsychism. The typical product of intellectualism, however, is naturalism, the view of life offered by modern science. Naturalism plumes itself upon its appeal to positive fact; yet all the while it is unable to explain the fact of conscious life in the world or the relation of that life to nature. Socialism takes too mean a view of life. In reducing the life-problem to an economic problem it makes the human all too human. Socialism, like naturalism, is the product of modern democracy and mediocrity. It is an average-man-every-day view of life (*die Durchschnittscultur des Alltages*), which makes reason the equivalent of social agreement. Socialism forgets that every deepening of life has grown out of individual independence—that, for example, it owes its own life to a few men "of vital power and character," such as Marx. As against the submission of spirit to nature which is implied in the systems of naturalism and socialism, æsthetic individualism attempts to reassert the independence of the spirit by seeking a realization of life in the enjoyment of art. This, however, is a mere pretence of independence; in reality it is a passive submission to moods and conditions. Such then are the existing life-systems as they appear to Eucken. With the exception of Christianity all are in some way tainted with intellectualism and naturalism. Intellectualism begets naturalism, and naturalism presents us with a world which is foreign and hostile to the spirit.

If now a representative of naturalism should undertake to defend himself in the usual fashion, by an appeal to logic or to fact, Eucken would properly decline to reply. For in his view both logic and fact are departures from an original spiritual unity, and the only result to be expected from their guidance is more and more confusion. Yet in the meantime they point to a spiritual origin. The unity of nature postulated by natural science, the unity of society and of the personal self—in other words, the fact that men are able to deal with nature, to form and carry out plans, and to come to terms with one another—all this presupposes a spiritual basis underlying the life of nature and of man. Nor in the end is even naturalism a mere digression. It lies in the very nature of spirit that, in its progress towards a larger life, it should first divide and set up a world hostile and alien to itself. This is the negative stage, represented in our modern culture by a sharp opposition between the world and the spirit. But this only sets us the task of appropriating our world. We may not dismiss it as a final and insurmountable fact, taking refuge in our subjective consciousness, in the comfort of life or the enjoyment of art. Nor (though Eucken fails to show why) is any reconciliation to be expected from a further development of naturalistic logic. What is now demanded is a complete repudiation of this alien view of the world and a return to the spirit; yet not a return to the unity of the past, but rather a renewal of spiritual power in a higher synthesis and a new creative activity, such as mark the initiation of the great epochs of history. In brief then the present culture offers nothing but paradox, confusion, alienation, and division. No merely human and individualistic philosophy can save us—no considerations of self-preservation, social and economic welfare. The motive must be sought in a unity transcending nature, a universal, cosmic Life, in which "all walls of partition and all differences fall away" and our individual lives are both unified and finally realized in the personal life of God.

Thus far one might say that Eucken is simply a romantic edition of Fichte and Hegel. But in justice we must heed his denial. He points out that Hegel was an intellectualist, for whom the successive conflicts and reconciliations are simply so many terms in a syllogistic process the course of which was determined from the beginning. For Eucken each new epoch in the life of the world or of the soul is a new creation—never merely a deduction from antecedent terms, but a putting forth of new power which, in defiance of all the past, recreates the world. "It is by hard work alone in relation to men and to things that our life acquires a spiritual character." For this reason Eucken had adopted as the latest name for his philosophy the term "Activism"; and this power of dealing freely with the past, or with any alien terms, is what he chiefly means by "the independence of the spiritual life."

Hence, to give him his position among the philosophers, we might say that, as against Hegel, he holds activity rather than thought to be the essence of reality. But this means that, with Schopenhauer, Bergson, Nietzsche, the Pragmatists, and William James, he defends the rights of the will against the intellect. Yet he rejects the term voluntarism as too narrow and one-sided. He finds pragmatism "more inclined to shape the world and life in accordance with merely human conditions and needs than to invest spiritual activity with an independence in relation to them." Nietzsche is too much of an individualist and subjectivist and too rude and ill-tempered; and yet I think that Nietzsche is the one among all with whom he is in real sympathy. With Nietzsche he stands for the right of joyousness in life and for the supreme rights of genius; with him he condemns the Christian praise of pity and despises modern democracy; and the independence of the spiritual life is simply another edition of the transvaluation of all values. Like Nietzsche again he is a mystic, only an energetic rather than a quietistic mystic. No special insight is needed to grasp the significance of these comparisons. It is easy to see that Euckenism, in spite of its individual character, is also the true representative of what is just now uppermost in philosophical thought.

III

"The independence of the spiritual life"—can we give to this expression any clear and concrete meaning, that is to say, any meaning not dependent upon special spiritual insight? Boyce Gibson finds the key to Eucken's meaning in his "spiritual conception of history," and, though I cannot see that the pupil is much clearer than the master, I shall endeavor to follow his suggestion. In the first place, "the spiritual life," though possibly the only phrase available, is a weak rendering of Eucken's *Geistesleben.* The term "spiritual" is too colorless and romantic, even when freed from pietistic associations. According to Eucken, the spiritual life is the intensively self-conscious life, the life which is intensively conscious of its own movement.

Now, with this in mind, we may grasp the spiritual conception of history if, following an undeveloped suggestion of Eucken's, we raise the question, What is the difference between history as a mere movement in time and history as a movement conscious of its own movement? The question contains its own answer. The movement in time is a strictly determined chain of causation; at every instant the future is already determined by an irrevocable past. The father begets the son, the son the grandson. In a mere movement in time the son can do nothing but transfer the inheritance of the father. But now let the son clearly realize that he is a bearer of heredity: in that self-consciousness, according to Eucken, the whole situation is revolutionized. First, a discrete series of aims is replaced by a unity of aim. The dull and stupid man (i. e., the man lacking in self-consciousness) acts from present impulse, caring not what the past was or what the future is to be; but any self-consciousness of the movement of life involves, thus far, a comprehensive, an all-at-once, view of present, past, and future.

But, for Eucken, this increased comprehensiveness is, just in itself, a new creation of activity, a new power "inwardly" centred, which asserts itself in independence of the mere time-series of conditions. For me conscious of where I stand in the time-series, the question is not wholly what my father was, but what I wish myself and my son to be. Nor is the past any longer an irrevocable and finally "hard" fact. Let it be what it may, I shall undertake to make of it what I will. Like a good chess-player, I engage to reply to any move of the outer facts, be they past or present, with a countermove which shall give me my game. So of any present situation in the life of a nation. A nation conscious of its own history is thereby freed from the power of tradition. At the same time it may be more than ever bound to the past. But the bond is no longer the compelling power of an irrevocable fact but now the "inner" bond of sympathy and free choice. And thus, through the self-consciousness of its own movement, the life of the nation acquires an "inner" coherence and independence of the time-order of outer conditions, which is at the same time ever freshly creative. This inner independence is involved then in the difference between any movement in time and the same movement conscious of itself.

This, I trust, will serve to show what Eucken has before him, and also that he has something real before him, when he tells us, for instance, that a spiritual movement is a movement transcending time; or that every higher synthesis, or organization, of human activities is a new creation of a power transcending nature; or again that all the forces determining human life, as life, are spiritual forces. It is not difficult to see that the idea contains tempting possibilities for the philosophy of history and of religion; and in the case of Eucken it imparts an intelligibility to much that would otherwise be mysterious but which I am nevertheless unable to reproduce. More interesting from a temporal standpoint is the force that it gives to his criticisms of the historical and social sciences.

For what, for the most part, is our boasted historical method but the reduction of spiritual movements to time-series of events? Again what economist pauses to consider the effect upon "economic laws" of the study of economics? And what criminologist in his search for the causes and conditions of crime thinks it worth his while to study crime as a self-conscious process? Perhaps it will be said that what is needed here is a little more psychology. I doubt, however, whether any of the sciences is more indifferent to the significance of consciousness than psychology itself, which, by the way, is a favorite object of Eucken's contempt. In spite of all criticisms, our psychology is still deeply rooted in the associational tradition that the mind is a time-series of states. When the psychologist is confronted with the fact that we are now directly conscious of the past he simply invents a "memory-image" to represent the past in the present and keep the series discrete. The result is that, while our psychology is an excellent account of the relation of cards in a pack or, as Bergson has put it, of the relation of pictures in the cinematograph, it is utterly foreign to the life-experience of any human being.

Hence I should say that, in his affirmation of the spiritual realities as against the social sciences, Eucken is preaching a doctrine of vital importance. For fifty years past, under the influence of the biological theory of evolution, most of our theories of human life have been based upon the conception of the animal species. We hardly pause to reflect that, of all the species, man alone is capable of forming a history. And it can hardly be doubted that our forgetfulness of this most momentous of all distinctions has reacted unfavorably upon the tone of moral and social life. Thus far Eucken's criticism touches the point. If, however, we ask what he has done to make his criticism effective in the regions where it is most needed the answer must be, nearly nothing. He has hardly taken the trouble to formulate it in a manner to compel recognition. Nor may we suppose that the formulation is quite clear to himself. Apparently his repugnance to modern science is the aristocratic repugnance of a gentleman to a tough, with whom a rough-and-tumble argument, conducted according to Aristotle's rules, would be unseemly and vulgar. Hence he never grapples with his antagonist; and the result is that he lacks the stimulus and the contrast necessary to develop his conception of the spiritual beyond the iteration of a few very general aspects. Had he undertaken to state some of the concrete consequences of being intensively self-conscious, he could hardly have failed to include a clear perception of the world before us, the world of nature and of our fellowmen, and of our individual distinctness in and from that world. But then he must have admitted that neither intellectualism nor individualism is lacking in spiritual motive. Nor could he have failed to see that the despised democratic movement is itself the outcome of an awakened self-consciousness, and thus a true development of inner and spiritual power.

The same may be said of his criticism of natural science. Here too I think he shows a penetrating sense of the realities. Our imagination is so completely filled with the victories of science, as exhibited in antitoxines and aeroplanes, that we fail to note the paradox that these results are reached through a point of view which makes nature wholly indifferent to human aspirations. James says somewhere that no man can steadily contemplate the certainty of his own death. Just as little can a man fix his attention upon the universe as presented by cold-blooded science, especially as that universe is revealed by the modern telescope, without a desolating sense of the nothingness of human life. After all are we not mere intruders? And in the face of the "starry firmament without" what is left of "the moral law within"? Hence, as Eucken points out, beneath the comfort and splendor of our modern life there runs an undercurrent of pessimism regarding the value of life itself.

But here again Eucken's anti-intellectualism blocks the only way out of the difficulty. For the paradox is not merely ethical; it is a logical paradox as well. Modern science congratulates itself (perhaps too hastily) upon having drawn from its web the last shred of anthropomorphism, or animism. The question arises then whether it has not broken the last thread which would bind the world to our human imagination and make it humanly intelligible and knowable. And perhaps it is not irrelevant to note that the turmoil of ideals which, for Eucken, is characteristic of our modern culture is now paralleled by a similar turmoil in the field of scientific conceptions. If, however, we are to spiritualize—to humanize—our world, if we are with any confidence to reject the interpretations of naturalism and find in nature the justification of a more spiritual view of human life, one of the first things necessary is a painstaking analysis and reconstruction of the motives and conceptions of science—in other words, a new logic of science. And if, as Eucken teaches, the independence of the spirit is reached "by hard work alone in relation to men and to things," here surely is a task of a distinctively spiritual kind, calling for the finest talent and courage. A mere beginning here would go far to insure him against the charge, which he evidently apprehends, of romanticism and sentimentalism. It is evident, however, that the task is too technical for his tastes.

Such, then, is the independence of the spiritual life. I cannot admit, with Eucken's pupils, that, as the prophet of a new religion, he is not to be tied down to exact modes of thought and expression; for as a critic of philosophical movements, he challenges philosophical criticism. His conception of the spiritual is inarticulate and his criticism of science ineffective. Nevertheless, his philosophy is based upon the firm grasp of an idea of immeasurable significance both for the philosophy of religion and for any comprehensive view of human life—the idea, namely, of the originality, the inner unity and independence, of any process so far as it is conscious of its own movement.

IV

THE PHILOSOPHY OF BERTRAND RUSSELL

Some years ago one of the undergraduate magazines printed a cartoon representing the corner of a philosophical lecture-room during a lecture on philosophy. Of the eight or ten students shown in the picture two or three were reading magazines, two or three were yawning dreadfully, while the others were fast asleep. Beneath appeared the words, "Is there an external world?" The student who designed this cartoon is probably entitled to rank as the original "new realist." For two centuries or more philosophers have been turning over the question how an idea (assumed to be circumscribed) can know an object which lies beyond its circumference; and those who have been brought up upon this discussion should be ready to appreciate, or at least to forgive, the philosophical movement which has been advertising itself in America for several years past as "the new realism," and which is represented in England by Bertrand Russell and George E. Moore. Of the philosophers of this school Mr. Russell is easily the most commanding figure, and his philosophy has been neatly summarized in his little book on *The Problems of Philosophy* in the Home University Library.

Recently I have given this book to two classes in philosophy, with very interesting results. First, it was shown that a man who writes with distinction and with personal authority will capture the undergraduate where the textbook-maker fails. Mr. Russell's style is wonderfully clean-limbed; or, as his mathematical colleagues would say, "elegant." His skill in putting Kant or Plato into a page or two would be hard to surpass. Being quite assured of his position, he writes with an easy and confident frankness both charming and a trifle irritating. For between the lines may be read that if you fail to agree Mr. Russell will be merely amused. The more so since he must surely be aware of the pitfalls that await the unwary. On its face the book is a series of astounding dogmatisms which have all the appearance of artlessness, but which for the most part have (elsewhere) been carefully predigested. For example:

"If we already know that two and two always make four, and we know that Brown and Jones are two, and so are Robinson and Smith, we can deduce that Brown and Jones and Robinson and

Smith are four. This is new knowledge, not contained in our premises, because the general proposition, 'two and two are four,' never told us there were such people as Brown and Jones and Robinson and Smith, and the particular premises did not tell us that there were four of them, whereas the particular proposition deduced does tell us both of these things."

This would be set down as rank nonsense by one who did not know that in an earlier work Mr. Russell had agreed to assume that "Brown and Jones are two" shall mean that Brown and Jones exist.

The other result appeared when my pupils endeavored to give Mr. Russell his place among the schools of philosophy. Then it turned out that (as one pupil wrote) no one "ism" had been provided for Mr. Russell. For he achieves the remarkable result of standing for a naïve empirical realism and, with the same uncompromising firmness, for a high and dry Platonic idealism; or, since, in his philosophy, both are forms of realism, for realism in the modern sense and for realism in the mediæval sense.[1] His world consists, in other words, of two kinds of reals: the particular reals of common experience, such as the sun, which, as an independent real, is not less real when unperceived, or such as our thoughts and feelings; and the universal reals, such as those expressed in the formulæ of mathematics, the most remote and apparently irrelevant of which stands for an "entity" not less self-subsistent and independent of the mind by which it is known than the sun itself. The only difference between these two kinds of "entities" is that the particular reals "exist," while the universals "subsist" or "have being." But the latter are superior to the former as perfection is superior to life. How being and existence are combined, we are not clearly told. In the new realism it seems that doctrines have no need of being combined to be held by the same person. Yet there is a certain unity in Mr. Russell's philosophy not quite covered by his general admission of "tough-mindedness," and his peculiar combination of matter-of-fact with Platonic realism becomes more intelligible when we remember that he is a Cambridge mathematician and an aristocrat.

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[1] This was written in 1914. From an essay on "Philosophy in the Twentieth Century," printed, I think, in 1926 and reprinted in the volume of *Sceptical Essays* in 1928, I learn that the Platonic realism, half of Mr. Russell's universe, had some years before quietly slipped overboard, apparently without disturbing the philosopher.

Mr. Russell's most impressive achievement began as *The Principles of Mathematics,* of which the first and only volume appeared in 1903. The plan of this work was abandoned, and in 1910 Mr. A. N.

Whitehead and Mr. Russell published the first of four volumes (of which three have now been issued) of a new work, entitled *Principia Mathematica.* The first book was written in English, the second is written largely in the sign-language of the symbolic logic. In this language the work is a nearly closed volume and a standing menace to all students of philosophy who object to doing two thousand or so large octavo pages of symbolism without a more certain hope of reward. For enough may be gathered from the more intelligible portions to learn that under these signs Messieurs Whitehead and Russell have hidden the secrets of the universe. The *principia mathematica,* in a word, are nothing less than the *principia* of logic and metaphysics. Formerly indeed mathematics was supposed to confine its attention to number and space. The newer mathematics of groups and series claims to have devised a calculus of relations which will cover all "entities" whatsoever; not only volumes and numbers, but persons, ideas, sensations, emotions, prices, moral values, commercial transactions—anything you please. From this point of view truth of any kind is a question of mathematical relations; and what cannot be expressed in symbols is not true. Nor beautiful; in his essay on "The Study of Mathematics" Mr. Russell betrays an enthusiasm which recalls Plato's identification of mathematical truth with divine love. Mr. Russell's philosophy may thus be described as a symbolic philosophy, and the description may be extended to the new realism generally. In the division of labor Mr. Russell supplies the symbolic logic, Mr. George E. Moore the symbolic ethics (see his *Ethics* in the Home University Library), and the American new realists the symbolic psychology.

One need not go far to appreciate the fascinations of this symbolic calculus. Professor Royce, himself an idealist, conceives it to be the embodiment of rational and divine order. To my own imperfect view quite as much may be said for the calculus of chess, which seems to me to be a symbolism of the same kind, with equally fascinating problems. In other words, I should say that the symbolic reals are about as truly representative of life and experience as a bishop whose activities were confined to diagonal squares would be representative of the Archbishop of Canterbury. I may even intensify the vulgarity of this judgment by suggesting that the chess symbols are too human and personal. The realistic world may be better conceived as a mosaic of counters, i. e., poker-chips. Does Desdemona love Cassio? Write "Desdemona" and "loving" and "Cassio" upon so many poker chips, and then in their possible arrangements you may see the possibilities of love "between" Desdemona and Cassio. One is reminded of Mr. Kallen's remark that the new realists are the philosophical cubists.

Among the new realists the point of most undoubted unanimity is a contempt for modern idealism. And for purposes of unrestrained emphasis they prefer to identify idealism with the blindest expression of the theory in Berkeley's *Principles*, and thus to make the whole issue rest upon the question of the existence or non-existence of an external world. This interpretation not only leaves idealism unaccounted for, but fails to reveal the true inwardness of the realistic antipathy. If, following a fashion condemned by realism, we judge idealism by its motives, it should seem fairly clear that one motive underlying all forms and degrees of idealism is what Kant called "critical." The "critical" motive takes account of the fact that any object that is known is known by a person and may be expected to have a character which reflects the point of view of the person who knows it. Such a point of view will be embodied in any vehicle of description, not excepting the signs of symbolic logic. The critical philosophy takes the world as we have it (for example, in natural science), and then asks how far this world is the expression of human nature. According to Kant, human nature explains why things are known in an order of space and time; and the pragmatists have discerned in the world an expression of our needs. In Berkeleyan idealism the critical motive fairly swallows up the world. But to identify idealism with the philosophy of Berkeley is simply a quiet way of ignoring what nine-tenths of the idealists have stood for, and, in particular, of passing over their contributions to logic.

Now the new realism is not merely opposed to the incredibilities of Berkeleyan idealism, it is hostile to every attempt to take our world critically. For the new realists it is not enough to deny that the world is created out of nothing in the process of knowing; going to the opposite extreme, they insist, as a sort of axiom, that the fact that our world is known makes no difference whatever in what it is known to be. The new realism is thus a return to pre-critical dogmatism, a deliberate and conscious, even highly self-conscious, assertion, if one may put it so, of naïveté. For the school is not wanting in scholarship, though it appears to have lost the historical sense; and Mr. Russell's reading is extraordinarily extensive. In his *Foundations of Geometry* published at twenty-five he owns an indebtedness to such prominent idealists as Bradley, Bosanquet, and Sigwart, while the book is dedicated to McTaggart. But they must have cancelled the debt, for there is clearly no evidence of it left. Mr. Russell writes as if the philosophers of this school had never lived. Nay, more. The American new realism would be what it is if nothing had happened since Mill. Mr. Russell's realism is a sort of delighted mediævalism.

The American new realists forego the function of criticism out of respect for modern science. Their favorite argument is the *argumentum baculinum*. Mr. Russell uses the walking-stick, but his distinguishing prepossessions are mathematical. Now one of the prepossessions of mathematicians is that they have a special monopoly of reasoning; and again that they are peculiarly, if not exclusively, successful in arriving at absolute truth. And it is true that mathematical results have the appearance of being uniquely impersonal and absolute. This fact furnished the ground for the mystical number-metaphysics of the Pythagoreans. Since Kant, however, the absolute significance of mathematical truth has been at least open to dispute. And it is a question whether the tendency of mathematical theory itself has not been to confirm, while enlarging, Kant's position. The late M. Poincaré, at any rate, was a fairly good Kantian. Mr. Russell's mathematical theory is a return to pre-critical absolutism. Not only does he hold, against Kant, that space and time are independently real—that is, irrelevant to any human point of view—but, against most modern views, he stands for absolute movement and position and for the theory that space is an assemblage of points. The climax is reached when he tells us (in *The Problems of Philosophy*) that "two and two are four" "must apply to things equally whether we think of them or not." How this realistic situation is to be described is beyond my power to conceive; and it seems relevant to ask whether the two's of the real world are yards or metres, and also whether they are "two's" or, say, "zwei's." One is reminded here of a realistic little maid, who, after learning that "Adam gave names to all cattle, and to the fowls of the air, and to every beast of the field," asked, "But how did Adam know their names?" This is the realistic problem.

One of the peculiarities of the mathematical mind is the equal delight of mathematicians in what can be clearly defined and in what cannot be defined at all. The mathematician affirms his theorems because they can be proved from his axioms; he then with equal emphasis affirms the axioms because they are incapable of proof. Thus the love of the transparent is united with the love of the opaque. The new realism, as I have remarked elsewhere, is a typical philosophy of the opaque; and Mr. Russell is no exception. He believes in the reality of the material world because of an "instinct," in tomorrow's sun because it is "probable," in the veracity of memory and in the truth of the simple propositions of arithmetic because they are "self-evident" —although he admits, in seeming contradiction to the assumptions of symbolic logic, that propositions may be more or less self-evident. It would be difficult to find better examples of what Shakespeare calls "a woman's reason" or a more masculine courage of affirmation.

One of the foundation stones of Mr. Russell's logic is the proposition, *p* implies *q*. The analysis of implication is dismissed in the *Principles* with the statement that "implies" is indefinable. In the *Principia p* implies *q* is defined to mean that "if *p* is true, *q* must also be true"—which leaves the nature of the relation still open to discussion. For example, there is a dollar in my purse, and my purse is in my pocket. Do these two propositions, merely as such, imply that there is a dollar in my pocket? I, for one, should say not. There is nothing implied, for example, if Peter knows only that there is a dollar in my purse, while Paul knows only that my purse is in my pocket. Let the facts be what they may, nothing is *implied*—there is no logic in the situation until the two propositions are thought by the same person; just as twelve words thought separately by twelve persons fail to constitute a sentence. The symbolic logic claims to dispense with this necessity for a personal thinker. The symbolic logic is definitely, in fact, a method of arriving at truth through the investigation of the possible "aggregations" of propositions. What an aggregation of propositions may be must be left to the reader to say. The symbolists seem to regard any two propositions as an aggregate when they are asserted simultaneously, irrespectively of whether they are asserted by the same or by different persons or by different persons in communication. To me the word "aggregation" suggests something more like potatoes, each of which remains within its own skin; and where propositions remain each within its own skin I am unable to see any "logical" connection whatever. I am thus led to suspect that the symbolic logic has confused logical implication with spatial inclusion and displacement. When more potatoes are forced into a full basket, others are forced out. But this is not a process of implication except as one term signifies the other in the point of view of a knowing mind. This must be my excuse for suggesting the poker-chip interpretation of Mr. Russell's logic. To me it seems that the symbolic logic (along with much of our symbolic psychology) writes our thoughts upon counters and then studies the various arrangements and displacements of the counters.

The world of independent reals is sublimely beautiful, but it is not expected to prove either familiar or tractable. The realism of this school presents, in fact, an interesting parallel to the realism of Flaubert or Zola or Thomas Hardy, in whose presentations of life the characters are borne along on the stream of unconsciousness forces, foreseeing their destiny apparently (the reader can usually foresee), but mysteriously incapable of altering it; and nothing has a happy ending. Both in philosophy and in literature realism stands for the doctrine that consciousness makes no difference. The realism of the American school takes a rather work-a-day attitude towards its world and apparently assumes that philosophy, if it cannot reconstruct, can at least make the world more comfortable. Mr. Russell holds that philosophy has no "practical" use whatever:

"Philosophy is to be studied, not for the sake of any definite answers to its questions, since no definite answers can, as a rule, be known to be true, but rather for the sake of the questions themselves; because these questions enlarge our conception of what is (theoretically) possible, enrich our intellectual imagination, and diminish the dogmatic assurance which closes the mind against speculation; but, above all, because, through the greatness of the universe which philosophy contemplates, the mind also is rendered great, and becomes capable of that union with the universe which constitutes its highest good."

Greatness of mind! Does this mean that life is great only so far as it is lived in the light of a clear self-consciousness? For a generation given over to the pragmatisms of unillumined energism this should be a wholesome doctrine. But in Mr. Russell's view knowledge and life are mutually irrelevant—as they are bound to be. Following the example of Aristotle, he separates the "speculative" virtues from the "practical." Philosophy, it seems, then, is a noble pursuit for those who are economically free; nobler than hunting or golf; yet equally unproductive from the standpoint of practical life. Philosophy, in other words, is appropriate only to a leisure class.

Mr. Russell's ideas about religion are embodied in a fine essay entitled "A Free Man's Worship," in which he preaches the ancient Stoic doctrine of lofty submission to Fate. I quote the closing paragraph:

"Brief and powerless is Man's Life; on him and all his race the slow, sure doom falls pitiless and dark. Blind to good and evil, reckless of destruction, omnipotent matter rolls on its relentless way; for Man, condemned today to lose his dearest, tomorrow himself to pass through the gate of darkness, it remains only to cherish, ere yet the blow falls, the lofty thoughts that ennoble his little day; disdaining the coward terrors of the slave of Fate, to worship at the shrine that his own hands have built; undismayed by the empire of chance, to preserve a mind free from the wanton tyranny that rules his outward life; proudly defiant of the irresistible forces that tolerate, for a moment, his knowledge and his condemnation, to sustain alone, a weary but unyielding Atlas, the world that his own ideals have fashioned despite the trampling march of unconscious power."

Shameful to relate, throughout this really noble passage, I find myself obsessed by the vision of a Platonic realist shaking his fist at a cigar-shop Indian. I can grasp what is meant by a rational attitude towards a benevolent or an accommodating universe, or towards a malevolent universe. But what would be a rational attitude towards a universe that is simply bloodless and inscrutable strikes me as a most perplexing problem, and a problem which realism has yet to solve. Meanwhile I ask whether a point of view so genuinely idealistic does not deserve—whether indeed the presence in reality of such a point of view must not imply—a more significant universe.

V

PRAGMATISM AND SCIENCE

PROFESSOR JAMES has called pragmatism "a new name for some old ways of thinking." But pragmatists as a rule have been interested more in the new name than in the old ways. This must explain why they have generally failed to see that the first and greatest of their school was Immanuel Kant. For it was Kant who, more than any other, established the great Copernican revolution—the humanistic revolution, as I should call it—in which the center of reference in the interpretation of scientific knowledge was shifted from the world that is known to the mind that knows it. Since Kant it has been scarcely possible to conceive of a science which should fail to reflect the character of the scientific mind. Yet it seems curious that Kant should have associated the name of Copernicus with a movement that transferred the center of reference from the world to man; for Copernicus, we may remember, removed the center of our planetary system from the earth to the sun and thus gave to our world a more foreign aspect than it had worn before. In point of fact Kant does something of the same kind. His world of nature is not a humanistic world in any very personal sense. Kant lived in an age whose ideal of science was still patterned exclusively after the astronomical achievements of Newton, and for which, accordingly, the type of science *par excellence* was mathematical physics. For Kant himself the two most sublime objects of thought were "the moral law within" and "the starry firmament without." And for Kant the beauty and sublimity of the celestial system lay in its eternal and unchanging regularity. To the thought of the eighteenth century this seemed to realize the perfect consistency of the divine reason.

Now there is no part of our world which is more discouraging to a humanistic interpretation, and certainly there is none less amenable to human will and desire, than this "starry firmament without." No department of nature offers a more striking contrast to the unpredictable variability of most of our human action. And yet, in Kant's view, this inflexible regularity of the heavenly bodies was the reflection of our human reason. How did Kant unite these seemingly incongruous elements? The answer is simple: he united by separating. To Kant we owe the rigid separation, still more or less current in psychology, of knowledge, feeling, and will.

In Kant's psychology all of the processes of scientific knowledge, or reason, take place in a compartment of the mind which is assumed to be inaccessible to the contaminations of personal desire. By this device he preserves the inflexible necessity of scientific law while making science the reflection of the human mind.

This means that Kant's humanism was far from complete. Kant's philosophy was a humanism modified to satisfy the authority of the Newtonian physics; and it did not occur to him, as it seems not yet to occur to his pragmatic successors, that the claim of science to deal with an independent reality might be satisfied by a theory of knowledge in which knowledge is determined by desire. I might point out indeed that Kant's humanism is not so imperfect as it seems, even in the *Critique of Pure Reason*—for the *Practical Reason* is clearly a humanistic document. But I prefer to let the statement rest where it stands in order to bring out more clearly the meaning of that later humanism which is called pragmatism.

For the difference between Kantian criticism and modern pragmatism centers precisely upon the question of the relation between reason and desire: are they dependent or independent? Kant's humanism is made awkward by the fact that in his psychology reason is independent of desire. For pragmatism reason and desire are at least mutually dependent—if indeed we are not to say that pragmatists adopt the opposite extreme and make reason *dependent upon* desire. This central issue is nowhere more boldly stated than in the chapter on "Reasoning" in William James's *Principles of Psychology*. To grasp James's point suppose we put before us the image of an old-fashioned reasoner—the reasoner as Kant would have described him. You will find his type in the figure of Justice blindfolded. For the first duty of the old-fashioned reasoner was to be strictly "impartial"—to decide the case upon the basis of the evidence furnished him, and upon that alone; to all else he was supposed to be "blind." And he cared not what result was reached provided only that it was reached in accordance with the laws of logic. In a word, his ideal was to be as impassive, and at the same time as coldly accurate, as an adding machine. A mere suspicion of bias, or even of personal interest, would vitiate his conclusions. Now in contrast to all this James maintains that reasoning is guided from first to last by a subjective and personal interest. Reasoning begins with an hypothesis to be tested; in other words, not with evidence, as the older view asserted, but with conclusions. For the matter of that, until you have first set up a theory, an hypothesis, a conclusion to be tested, there will be no evidence forthcoming. To the impartial seeker after facts the world is mere vacuity. No man of science is ever thus impartial; scientific facts are discovered because of their bearing upon interesting problems. Accordingly, in James's view, reasoning begins with a desire or purpose, with something that you wish to prove or establish; and the facts are gathered with a view to this purpose. The same purpose then determines the analysis of the facts, their definition and classification. At every step the qualities and relations among your data which you count as real are those which have a bearing upon your purpose. And in the end the only properly "logical" conclusion—the only conclusion that gives truth—is that which satisfies your purpose and yields the desired result.

This gives us the essence of pragmatism. In the ordering of philosophical theories pragmatism is the enemy both of realism and of absolutism. In the vocabulary of pragmatism all vice is "absolutism." Now realism and absolutism both teach that reality is independent of our human grasp of it; that nothing is made true by being known, much less by being desired. According to Kant, a proposition is made true by being known, if known in accordance with the rules of human reason; but, according to him, reason, though a part of human nature, is independent of desire. For the pragmatists reason and desire are one; and perhaps we should say that desire is the one. Hence a rational, or true, statement is the statement which satisfies our desire. A real object is an object in the existence of which we find it useful to believe. Truth is not already made, as the realists hold, but always being made by us for purposes of our own. To be true then is to satisfy our purposes—that and nothing more.

For a convenient illustration of the logic of pragmatism we may take the Copernican theory of the heavens. This formulation, according to which the planets revolve about the sun, is viewed by men of science as a modern discovery; by this they mean that this relation of the planets and the sun was at least not created by Copernicus. For the pragmatists the Copernican theory would be, not a discovery, but an invention. By them a theory of the heavens would be regarded as one of the necessities, let us say, of navigation. The older Ptolemaic theory, according to which the sun revolved about the earth, had reached a stage of complexity which rendered it no longer available for purposes of calculation; and the Copernican theory was devised to take its place. A second example would be the assumption of a universal law of cause and effect. James tells us that the question of cause and effect is suggested by the attempt to discover who is responsible for a given result. But I fancy that most pragmatists would prefer to point to the practical necessity of assuming an order of cause and effect if we are to set out to accomplish any purpose whatever; if planting is not to be followed by harvest it will not be worth while to plant. Voltaire said that if God did not exist we should find it necessary to invent him. By a similar necessity, according to pragmatism, we have invented the law of cause and effect.

One of the most striking illustrations of the theory is an example which James quotes from Ostwald. "Chemists have long wrangled over the inner constitution of certain bodies called tautomerous. Their properties seemed equally consistent with the notion that an instable hydrogen atom oscillates inside of them, or that they are instable mixtures of two bodies." But both views lead to the same *practical* result. Now a realist would hold that this is a case *either* of the instable atom *or* of the instable mixture. One or the other must be true—we cannot say which—but both cannot be true, unless it can be shown that the two phrases have theoretically the same meaning. But, according to James, both are equally true because, in practice, both lead to the same result. For pragmatism this is all that "truth" can ever mean. The complex laws of science are therefore only so many human inventions. Each of them has a practical meaning, and the practical meaning is the sole meaning.

Thus far the meaning of pragmatism seems definite and clear. But now we are to see that what appears to be clear upon the surface may turn out to be vague underneath. Suppose then that we put the question, What are the human needs? Are they needs only for bread and butter or have we also intellectual and spiritual needs? Or shall we say that intellectual and spiritual needs are only disguised needs for bread and butter? But may we not ask whether, as conscious beings, we have any need for bread and butter except as we need to eat it self-consciously? In a word, can science be satisfied with a world which as a brute fact does yield bread and butter? I need hardly say that these are questions of first importance; for, if we become pragmatists, they are the questions which will determine for us what kind of a world we shall take to be real; and in the meantime they must determine for us what pragmatism really means. They may convince even the pragmatist that his world is very different from what he now takes it to be. For suppose it should turn out that even the bread-and-butter needs are of the same type as the needs of sexual gratification; that, say, while appearing to be merely needs for physical satisfaction they are at the same time needs for physical satisfaction in a relation of spiritual fellowship. A world which satisfied this need would be very near the world of objective idealism.

Now I think I am not wrong in saying that our American pragmatism is disposed to emphasize the need of bread and butter and to hold that spiritual needs are only bread and butter needs disguised. At least I feel compelled to say this of the pragmatism of my friends, Professor Dewey and Professor Moore, although I am convinced that they would call the interpretation vulgar. [1] When I endeavor to state for myself their conception of the categories of science, I seem to find but one phrase suitable. Why do we need to look upon nature as a regular succession of cause and effect? Their answer seems to be: because we need it in our business; or, better perhaps, because we need it in our factory. For the term by which they prefer to name their special brand of pragmatism is *instrumentalism.* Instrumentalism teaches that the categories of science, such as the law of cause and effect, are but so many tools or instruments—though indeed highly complex instruments—for gratifying our needs. And what needs? So far as I can see, the only needs to be satisfied by such instruments are the needs of bread and butter. As I have already pointed out, there must be a direct relation between the kind of world that a pragmatist takes to be true and the kind of need that he wishes to satisfy. Now to look upon nature as a mechanism, or an instrument, after the fashion of the physicists and the chemists, does indeed satisfy the need for bread and butter. Thus far it matters not whether the bread comes from a machine or from the hands of a human baker. In the words of James, both views would be equally true. And if the need is above all for a strictly calculable source of supply, then doubtless the machine view is truer. But I cannot conceive any one to be satisfied with this mechanical view of nature who feels that his need of living with her, or even upon her, is also a need for understanding and fellowship.

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[1] It should be noted that both protested. See Professor Moore's reply in an article entitled "Pragmatism, Science, and Truth" in *The Philosophical Review* of Nov. 1915. I have seen no reason to retract, and I have carried the interpretation further in the chapter on "The Pragmatic Attitude" in my *Moral Philosophy* (1925).

The question before us is therefore the question of the logic of our needs. Pragmatism, instrumentalism, humanism—in all of these views the basis of logic is human nature, and in all of them truth (whatever else it may turn out to be) is an expression of human need. Now it would be false to deny that we find it useful to treat nature as a system of mechanical causation or that this treatment is dictated by a need for bread and butter. But is this the whole story—the whole story of our needs? Of this very need a different version is suggested by Bergson, who has also been called a pragmatist; and to my mind his analysis is far more penetrating and illuminating. Bergson agrees with the instrumentalists in holding that the mechanical conception of nature is the outcome of our need for bread and butter, but according to him it is at the same time the expression of another need. The mechanical conception enables us to have practical dealings with nature. But why? Bergson's reply is: because, to a prevailing type of mind, the mind of the natural scientist, this conception renders nature more intelligible—or, as he would prefer to say, more amenable to intuition. In a word, while the mechanical view of nature does indeed supply us with bread and butter, it is at the same time a reflection of the fact that man himself is a machinist.

To see what this means let us suppose that we are seeking an explanation of animal life. I need hardly point out that, in spite of the vitalism of Driesch, the main endeavor of biologists today is to explain the life-process in terms of mechanism; and this means that a process which on its face appears to express a unity of purpose when taken as a whole is analyzed into a series of temporally discrete operations each of which is led to its successor by the blind force of mechanical necessity. Bergson points out then that this method of producing a result is precisely what you find in a factory. For example, a kid glove which we might well suppose to be formed by the manual skill of a few persons, passes through no less than fifty or sixty hands, each of which performs a single mechanical act. The fact is that we men are unable to produce a glove as nature produces an organism, in one continuously coördinated act. The form and purpose of the glove are in no wise logically implied in the act of slaughtering the animal for his skin; and, though the skin be stripped, or even tanned, it is not yet determinately the embryo of a glove. In our human industry, and especially in organized industry, it seems necessary to divide the operation into a number of successive and virtually independent stages. Accordingly, says Bergson, when we seek to understand nature we read our own necessities into her. Our immediate intuition of life tells us indeed that the growth of an organism must be something very different from the manufacture of a glove; yet when we attempt to bring nature to terms of practical clearness we seem almost compelled to impose upon her the routine of the factory.

Bergson uses this illustration as an argument against "intellectualism" and in defense of what he calls "intuition." In his view what is chiefly demonstrated is the fatal mendacity of intellectual analysis, or, for the matter of that, of all analysis. But I believe that we may accept the doctrine of intuition without ceasing to be analytic. For my own part, I should say that it is just the intellectual, if you please to call it so—at any rate the activity of intelligence—that constitutes the superiority of human life to that of the animals. It is the working of intelligence that elevates the enjoyment of Beethoven or of Tschaikowsky above the enjoyment of a good dinner, and it is this that transforms erotic gratification into a relation of personal loyalty and gives to the sex side of our nature a moral value and nobility. When Bergson calls a man an intellectualist, he means, I fancy, that the man has the soul of a mechanical engineer; and he points to the mechanical theory of nature as a depressing illustration of the engineering philosophy of life. I should prefer to point to Bergson's analysis of the engineer's point of view as true type of intellectual analysis.

What then is the significance of this analysis? To see its point for ourselves let us return for a moment to the instrumentalist. Instrumentalism, we remember, is the school of pragmatism which holds that the categories of science, and in particular the mechanical category, are so many instruments, or tools, for the satisfaction of our practical needs. And the instrumentalist himself, as we may now see, is none other than Bergson's intellectualist —the man who looks at the world from the standpoint of the engineer. For the instrumentalist the world is an engine; this embodies his conception of what we need. If, however, we accept Bergson's analysis, we shall say—shall we not?—that, even granting this instrumental view of science, what the scientist really seeks here, in the mechanical theory of nature, is not so much an engine as an engineer. We look upon nature as a mechanism, not because, in some opaque fashion, the view "works," or yields results—what is there, in the first instance, to suggest that such a conception would work?— but because, in more intelligible fashion, this conception of *the working of nature* enables us to come to terms with her, to make arrangements with her, to anticipate her in somewhat the same way in which we anticipate the intentions of our fellowman. All of this means that, upon any deeper analysis of motives, instrumentalism must turn out to be a form of anthropomorphism. This does not mean that I condemn it; on the contrary, I propose to defend it. Meanwhile I have suggested that the kind of pragmatism a pragmatist stands for must depend upon his conception of our human needs; and further that, as conscious agents, our need is not merely to consume bread and butter but to consume it self-consciously. Shall we not say, then, that, in the scientific construction of our world, our deepest need is for a world that shall be from our human standpoint intelligible?

To see that a need of this kind is in fact embodied in the formulations of science I suggest that we recall once more the contrast between the Ptolemaic and the Copernican theories of the heavens. According to positive science the Copernican conception was nothing more than a late discovery of an eternal fact; according to the pragmatist the Copernican conception was an invention for satisfying practical needs. But I think that the pragmatist is in danger of weakening his point, and that he lays himself justly open to the charge of creating a subjective and fictitious world, by speaking constantly as if an invention were invented out of nothing—as if, in the present case, there were no reality to which the Ptolemaic and the Copernican views are related. Accordingly, I propose the question, If the earth goes around the sun, must not the sun also go around the earth? When the question is thus stated, we perceive at once that it all depends upon which of the two we choose to regard as stationary; and then we see that a stationary point anywhere in the universe is just the most arbitrary of all assumptions. Why then do we now choose the sun to remain stationary? The pragmatist tells us that this conception is more convenient. But then we are obliged to ask him how a conception can be more convenient except as it renders the object more intelligible; and this is to ask what it is that renders the heliocentric system more intelligible.

Suppose we put the question to the positive scientist. We receive the same answer in somewhat different terms. The preference of the positive scientist for a system which has the sun for its center is based upon the claim that this conception is "simpler"; and for him, very curiously, the simpler conception always represents the positive outer fact. Very curiously, I venture to say; for your positive scientist prides himself upon nothing more than upon his entire freedom from anthropomorphic superstitions. Could there be a more naïve anthropomorphism than the assumption that nature always works with the fewest possible general principles? Or, in more technical terms, that she is guided by the laws of parsimony? It is quite clear that we should be so guided ourselves. But this only serves to remind us that "simplicity" is a matter of personal point of view. It is a common remark that all things are equally simple to him who understands. Your gasoline engine is complex only so long as it is imperfectly mastered. The advanced mathematician finds it simpler to deal with special problems by means of highly generalized theorems; but his mode of approach is anything but simple to a child. Now for the older, or Ptolemaic, astronomy it was simple enough to think of the sun as revolving about the earth; but when it came to the other planets it was found necessary, upon more exact observation, to introduce subsidiary movements, or forces, in the form of epicycles; and these epicycles became so many as to render it impossible to form a single clear picture of the planetary situation. Yet, for all this, are we to suppose that a geocentric formulation is once for all impossible? That no mind could be conceived for which this formulation should not after all be simpler? Once more we may put the question, If any member of the solar system moves with reference to the other members, must not all the other members move with reference to this? And then will not any member serve as a center? Why then is the heliocentric conception simpler? For no other reason, it seems, than that this view of the situation renders the working of the system more easily conceivable and intelligible from the human, or at least from our present human, point of view.

And renders it intelligible, we may go on to say, from the standpoint of our human motives for action. For if we now inquire more closely into the advantages of taking the sun as the center of our system we shall find that they consist chiefly in the fact that upon this assumption we may resolve the motion of each of the planets into two rectilinear forces, the attraction between the planet and the sun and the tendency of the planet to "fly off at a tangent." But what advantage do we gain by translating a curvilinear motion into two motions in a straight line? I am inclined to think that when children are told that, if the sun's attraction should cease, the earth would move off into space in a straight line, they often wonder why it should not just as well continue to move in a circle. Why must a body moving of its own momentum follow a straight line? For an answer to their question they are referred to Newton's first law, which reads: "Every body continues in its state of rest or of uniform motion *in a straight line*, except in so far as it may be compelled by force to change that state." In other words, free motion is never circular, or elliptical, or what not, but always rectilinear. And this rectilinear character, we are told, is a logical and impersonal necessity of thought. Thus the advantage of the heliocentric system seems to be that it more easily enables us to conceive the movements of the planets in terms of logical necessity—as formulated in Newton's law.

Yet I think that only a little reflection is needed to see that this seemingly most impersonal of scientific law is really far from impersonal. A body in motion will move until stopped, a body at rest will remain at rest until moved. Why? My answer is precisely how we ourselves should behave. Newton's law simply reads into the universe that aspect of motive which makes our own action intelligible. But why must free motion be rectilinear? Again it seems to me that (following a suggestion of Poincaré) we should say: because our own free motion is rectilinear—because, owing to the transverse symmetry of our bodies, it is easier for us to walk in a straight line than to follow the path of a curve. True, it is not quite easy to follow a perfectly straight line. When we close our eyes in walking we may find that, owing to an imperfect symmetry of our bodies, or at least to a difference in the natural stride of the two legs, we tend to turn to the left. But this only serves to suggest that, if we were markedly asymmetrical, the shortest distance between two points might lie in the path of a rather sharp curve. In that case we could scarcely continue to say that a straight line is the shortest distance between two points; nor again that a body freely moving must move in a straight line.

All of this may serve to suggest that the aim of science is not merely to find in nature an opaque and unintelligible instrument, still less to record a set of positive and absolute facts, but rather to discover in nature an activity intelligibly motivated in like fashion with her own. And when our attention is once directed to this aspect of science we find the evidences forthcoming on every side. For one more illustration I shall make use of Weissmann's theory of heredity. Looking at evolution in an obvious and popular way, we should be tempted to say, with the Lamarckians, that evolution takes place through the inheritance in the offspring of characters acquired in the life-experience of the parent. But when we try to figure to ourselves any method—that is to say, any mechanism—by which such inheritance could be accomplished, the result seems all but miraculous. That cutting off the tail of a white rat must remotely have an effect upon its offspring seems probable enough; but that it should have just the effect of producing a tailless offspring seems most extraordinary. For this reason Weissmann makes it a point to deny that the experience of the parent is responsible, in the offspring, for any positive character whatever. According to him, all the characters of the offspring are due to what he calls the germ-plasm, which, at least in the earlier and simpler form of the theory, remains eternally independent of the body-plasm and has been passed from parent to child unaltered since the beginning of life. That some characters appear and others fail to appear is due to the selective effect of the environment. But the point of the theory is that no new character is created. The germ-plasm then is a mechanism—for Weissmann is careful to insist that his is a mechanical theory of life—which, through all the changes and chances of the environment, keeps the species true to itself.

By this interesting device the Weissmannians conceive that the explanation of the life-process is freed from any implications of purpose or motive. Yet we have only to reflect upon the results accomplished by the germ-plasm to have the question suggested whether these results are not themselves, like the inheritance of acquired characters, all but miraculous. Those who take satisfaction in a mechanical view of nature seem often to forget that, as Bergson reminds us, the type for all mechanical explanations is the activity of man the machinist; and then they forget that in our human world the most automatic machine accomplishes nothing whatever without human guidance. The germplasm of Weissmann is supposed to guide the development of the organism automatically in a certain given direction amidst the countless variations of a complex environment. When I try to conceive this in terms of any ordinary mechanical analogy I find myself driven to think of a steamship leaving Sandy Hook with the wheel lashed in the direction of Liverpool. Any one familiar with the operation of steering a ship will know that, in the absence of the constant readjustments made by the man at the wheel, the chances are even that the ship will land upon the coast of South America or of Australia. In biological terms this would mean that what sets out to be a mouse might just as well end in a cow. But in point of fact the language of the mechanical biologists suggests that they too have placed a man at the wheel. For they speak constantly of the "control" exercised by the germplasm, or by the determiners of heredity. Not long ago I ventured to point out to a biologist the teleological implications of that word "control." His reply was that biologists must make use of the words that the language affords them. But words stand for conceptions, and conceptions reveal the character of the mind. If our language refuses to lend itself to the description of a purely mechanical universe, it then becomes a question whether a mechanical universe is humanly conceivable and whether in fact the universe is actually conceived as such by men of science.

Hence I say that the need of a machine for practical purposes, which underlies the logic of instrumentalism, is at the same time a need for a world that shall be humanly intelligible. Remember that I do not reject the practical need; I say only that for a self-conscious being any practical need must be also intellectual. But this is not all. For what our previous analysis shows us is that our needs, though practical and intellectual, are even in their most practical aspects *social;* in other words, the mere need of dealing understandingly with nature is a need of dealing with a fellow. To make the point clear let us suppose, in pragmatic fashion, that marriage is an instrument for gratifying the bodily need for sexual intercourse. That this is a practical need, like the need for bread and butter, I think that no honest man can deny. Yet any deep analysis of this need shows us that, even in the coarsest of men, it is a need for fellowship, for the willing response of an "other," and that this need survives after the bodily need has grown faint.

But the same thing may be asserted of the need for bread and butter. At first glance we might say that we have no real need for social relations with a baker, but only for a machine which will supply the bread. But this, it may be suggested, is a reflection of the distracting influences of our modern life, which, by its vastly enlarged means of communication, imposes upon each of us a larger set of social relations than he can properly assimilate. One who is not a housekeeper has probably no dealings with the baker, but receives his bread from the hands of his wife or household servants. But this only serves to remind us how vital is the need of having our practical wants satisfied by those who are personally interested in us. And if we had to deal personally with the baker, day by day, we could not but feel the need of making our communications cordial; they could hardly remain merely impersonal.

The same motive seems to be implied, only more remotely, in the attitude of the scientist towards nature. It was clearer in the older scientist, before a convention of respectable impersonality, or a superstition about working for humanity, had forbidden the scientist to be at the same time a poet and a lover of nature. Yet I think it fair to say that the successful men of science are still generally those who select for their scientific study the objects that personally appeal to them. The botanist is a lover of plant life, the physicist a lover of machines. James quotes a saying of the French artisan about his favorite tool, *ça me connait,* it recognizes me; or, it speaks to me. May we not say that the deepest need of the natural scientist in dealing with nature is the need of having nature speak to him? Call this superstition, if you please, but what other motive will you invoke to explain his personal absorption, what other motive will sustain his unwearied pursuit, and how else may we justify his enthusiasm for science as transcending the considerations of practical and social utility?

I hold, then, that if we accept the pragmatic doctrine that truth is determined by our needs and then undertake to make an analysis of our needs, we can find no halting-place for pragmatism short of a complete humanism. This term has been applied to the doctrine both by James and by Schiller. But by "humanism" I mean a more thorough realism than either seems willing to avow; or, if apologies are due, they are due to Mr. Schiller. I find myself unable to justify the position—to me lackadaisical and sceptical—that pragmatism is merely a "method" for dealing with experience; for I cannot conceive a method of investigation which does not imply a theory of the nature of what is to be investigated.[1] And to me both "pragmatism" and "humanism" imply, even as methods, that we are dealing with a world assumed to be motived in like fashion—as remotely like as you please, yet in like fashion with ourselves. This I take to be the meaning of any whole-hearted humanism. But if this be its meaning, then we are obliged to ask why the teaching of pragmatism falls short of this; why does pragmatism take refuge in instrumentalism? This question brings to our attention the strange reverence of the instrumentalists for the point of view of "modern science."

When we venture to suggest that truth is something that is always being made we are at once confronted with the fact that in "modern science," so called, there is something peculiarly absolute and final. The attitude of modern science is well expressed in Comte's theory of the three stages in the history of thought: first the stage of theological superstition; then the stage of metaphysical abstraction—for Comte not less superstitious; and now, finally, the stage of positive fact. Positive and hard fact—like Mr. Gradgrind, your modern scientist is above all things a man of fact. In this final revelation human thought, groping through the ages, has found at last its solid basis. In the strictest sense, however, modern science is a matter of the last sixty years. Its gospel of method is to be found in John Stuart Mill's *Logic*. And the peculiar thing is that while Mill and Comte were founding a science of positive fact, Darwin and Spencer and Wallace were introducing a method for the transmutation of all fact under the name of "evolution." The theory of evolution suggests clearly that "modern science" is only one of the stages in a never-ending process. But scientists in general appear to be blind to the implication. And nothing is more offensive to a man of science than to suggest that future ages may look upon our modern science as we now look upon mediæval scholasticism, as one among the other stages in the history of thought.

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[1] Professor Moore's standing ground of complaint against the critics of pragmatism has been that they fail to see that pragmatism is concerned with method and not with metaphysics. In his *Experience and Nature*, p. 159, Professor Dewey admits—finally, but without apologies—that the pragmatic theory of thought is "a theory about nature."

In the theological and metaphysical stages the world was interpreted from a human point of view.

The positive stage appears to have discarded all points of view. Your modern scientist claims to look at facts with the naked eye, and I dare say that, to avoid possible distortions, he would prefer to discard the eye. At any rate he is firm in holding that his thought is in no wise colored by human motives; and to make the point clear he is never weary of a humorous reference to the older days when nature "abhorred" a vacuum. In his view all humanistic interpretations of nature are anthropomorphic or animistic; and all animism is primitive animism. They belong to that stage of thought in which, for example, the West African negro explains the drowning of his brother on the ground that the river bore him a grudge. In the eye of the man of science, the purpose of science is to free our thought from all motives whatsoever, to disentangle the fact from the mental processes of the knower and to see it as it is, uncontaminated, dry, hard, cold, and absolute.

Now I have no wish to suggest a disrespect for science. But I think that respect may always fall short of stupefaction. Much of our recent philosophy seems to have forgotten that one function of philosophy with relation to science is that of an interpreter and a critic. The new realism, of which so much is heard at present, seems to have repeated the experience of Saul on the way to Damascus, but without a corresponding revelation. The same influence has been at work upon the pragmatists, in which again they repeat the story of Kant. We have seen how Kant's humanism was cut short by a blind reverence for the Newtonian physics; and how, in his psychology, this resulted in an illogical and wholly artificial separation of reason and desire. In like fashion the logic of pragmatism is cut short at the point of instrumentalism. Like Kant himself, the pragmatist wishes to be in good repute among natural scientists. Which of us, asks Thackeray, would not like to be seen on the arm of a duke? Or, in the present case, on the arm of a millionaire? Yet, as it happens, the scientist of today is the typical absolutist. Nothing is so absolute as the absolute fact, and no theory of nature is so rigid in its demands as the mechanical theory. Perhaps we may say that this mechanical logic is just the essence of all absolution. Yet at the same time it is true that no intellectual movement in the history of the race has been so brilliantly successful in producing tangible results. In the presence of this dilemma the pragmatist demonstates his regard for modern science by taking the mechanical theory without criticism; and then he makes peace with himself by interpreting the mechanism as an instrument for the satisfaction of practical needs. The result is instrumentalism. By this compromise the path is closed to any further development of a humanistic logic. The very name means that the instrument, now once for all accepted as such, stands as a barrier to any deeper or more human interpretation of our needs. In instrumentalism, as Bergson would say, thought and logic have congealed. From the standpoint of a pragmatic logic instrumentalism is an unholy alliance with absolutism.

Now it seems to me quite possible to conceive of a more honorable agreement which will better satisfy both the realistic claims of natural science and the humanistic demands of pragmatism. The terms of this agreement will be outlined in the next essay. Meanwhile I will point out how we may meet some of the objections that lie in the way of a whole-hearted humanism. First we may meet the charge that such a view of the world must be condemned as anthropomorphic by asking how any view of the world which is possible for human beings could fail to be anthropomorphic. How are men to know the world except in the way that men can know it? How are they to conceive of God except in their own likeness? If the world is wholly foreign to themselves, then how can it be known at all? If it be objected that, at any rate, knowing should be independent of desire, then we may appeal to all human experience to show that knowing is impossible without the illumination of desire. Take any situation you please. Let it be the family dinner-table. Apart from the sympathetic interpretation of personal desire that scene would be wholly unintelligible; as formless as the arrangement of the stars in the heavens; as meaningless to you as the most mysterious of the ceremonies of primitive life. For the matter of that, you could not even discover the facts. It would not occur to you to suppose that the act of raising the cup to the lips meant the passage of the liquid down the throat. Accordingly, when the modern scientist tells us that he has discarded all points of view and has dispensed with all human interpretations, we may reply by telling him that his position is incomprehensible and absurd; he might as well boast of having discarded his eye. Knowledge, we shall tell him, transcends everything but discards nothing. Man is a far more independent animal than the lion or the horse though physically far weaker—not because he ignores the limitations of his physical organism but because he so thoroughly understands them. In like manner we transcend the prejudices of our human point of view by becoming aware of them. No error lies in the operation of motives; in an unmotived world there could be no truth. Error arises when the motive is blind to itself.

And therefore when we are charged with "primitive animism" we shall reply by gently suggesting that there is a difference—a difference as wide as the world—between a primitive animism and an intelligent animism. And the difference is logically of the same order as the difference between a provincial point of view and that of a cosmopolitan and humane culture. The primitive animist corresponds to the provincial American who regards the Frenchman as a monkey, the German as a pig, and the Englishman as a roaring bull, but who is most of all unable to characterize himself. Yet he cannot learn to know the alien races by ignoring his own race or nationality, or by forgetting himself, but only by interpreting their behavior in the light, extended through reason and imagination, of his own motives. To be able to do this is the first sign of intelligence in social life. Why should it not be a sign of intelligence in dealing with nature? It is true that nature, and especially inanimate nature, is inconceivably more remote a neighbor than any of our human fellows. A humanistic philosophy is in no wise logically bound to make the universe smaller or less impressive. It can quite freely admit that there are more things in heaven and earth than are even dreamt of in our philosophy. Let it be so. If we are to have a philosophy, if the universe is to be known, a relation of intercourse must be established between the knower and the known; and no intercourse will be established except so far as the universe can be made in human terms intelligible.

But now there is a more fundamental objection. When the pragmatist asserts that the truth is what he finds useful to believe, the realist, or natural scientist, meets him with the question, But what of the facts? And the pragmatist then retorts by saying that any unwelcome experience he will decline to treat as a fact. But this only means, so far as I can see, that the distinction between truth and fiction is thoroughly artificial and capricious; and this is the charge which is most frequently laid at the pragmatist's door. The realist will meet him with the following disjunction: either, he will say, truth is a matter of your needs; and then you will be unable to distinguish truth from fiction—for how could you need anything but truth? Or truth is independent of your needs; and then your needs have nothing to do with it. For only by a miraculously pre-established harmony could you expect that what you need to have true would at the same time be independently true. This disjunction appears to me to be palpably false. Yet it seems to be accepted both by pragmatists and by realists; by the pragmatists when they refuse to discuss the question of independent truth, by the realists when they deny that truth is in any way created by being known. But how truth may be both the satisfaction of our needs and independent of our needs is the question reserved for the next essay.

VI

PRAGMATISM AND TRUTH

AT the close of the last essay we faced the problem of making a humanistic philosophy true. What if the facts refuse to respond to our needs? May we then simply dismiss any such rebellious item from the world of facts? That, I should hold, in common with most of the critics of pragmatism, is to create an arbitrary distinction between truth and fiction and to make truth a matter of caprice. On the other hand, how may we say that science is both a representation of an independent reality and a fulfilment of our needs—how without assuming a miraculous coincidence between the world and our needs? If truth is always being made, how can it be independently true?

In the last essay I pointed out that the founder of the humanistic philosophy was Kant. We shall therefore do well to ask how this same problem presented itself to Kant; and we shall see that in the most important points the problem has not changed from Kant to the present day. The fundamental question, let us remember, is this: how can

I, the knowing person, know an object which is other than myself? Now Kant's humanism consisted in affirming that I can know nothing except in my own way; nothing can be real for me which does not satisfy my criterion of reality. How then shall we adjust the rights of the criterion with those of the reality itself? Kant answered this question by a reconstruction of the ancient Aristotelian distinction of form and matter. The distinction is a familiar one. Even our scientific friends are disposed to admit that, while experience contributes the material of facts, it is the scientist who builds them into the form of laws. But Kant's view was not quite so simple as this. According to him the forming process was at work in the very reception of the facts. The scientific view assumes that the facts are furnished ready-ordered in relations of space and time, and that the work of the scientist is confined to the determination of cause and effect. According to Kant the scientist is responsible for both processes.

That is to say, in Kant we have a distinction of two stages of form, the forms of perception, space and time, and the forms of understanding, or of scientific reason. The real world, the world of things in themselves, is in neither space nor time. It is we who give it a spatial or temporal character in the act of taking it. If, following James, we venture to speak of the "Kantian machine-shop," we shall say that in the factory of science as conceived by Kant, the material supplied by nature is met at the very door by a machine which converts it into an order of facts in space and time. From the space-and-time department the facts, now empirically ordered, are passed to the understanding-room to be reconstructed into an order, let us say, of cause and effect; or, in other words, to be transformed from mere perception of fact into knowledge of an objective world. This is a very summary statement; but it will be sufficient to suggest how, in Kant's view, the knower handles the known.

But now we face the question, How is the knower so fortunate as to find a material that he can handle? With this question we are in the midst of Kant's difficulties—difficulties which seem to have made his thinking ever uneasy and in the solution of which he was never quite clear. As formulated by Kant, the problem of scientific knowledge is to explain how we can make predictions which are afterwards verified. In 1846, after many years of work on the part of himself and of others, Leverrier calculated that an unseen planet, afterwards named Neptune, must exist at a certain spot in the heavens, and the astronomers at Berlin, having been notified, directed their telescope to that spot and verified the calculation. How could Leverrier expect that his calculation would be verified? This is Kant's question, to which in his complicated and repeated discussions of the problem he seems to offer two different answers. The first is that such a calculation is bound to be verified because the calculator had the conditions of verification all in his own hands. For the ground of this prediction, we must remember, was the form—in other words, the assumption—of an universal law of cause and effect. If the observation failed to verify, it could be put down as false, on the ground that such an observation was opposed to the law of cause and effect; that no planet existed at the given point in the heavens was simply not a fact. Kant's first answer then is this: the knower procures verification for his prediction, or hypothesis, by selecting from the mass of experience the items that would verify and treating only these as facts. In this answer verification is procured by selection.

Now while "selection" may explain how our predictions are guarded against disproof, it fails to explain how we happen to get the facts that will positively verify. If I step into the hatter's and ask for a certain size of hat there is nothing strange in the fact that I find it. But it would be indeed strange if I could step into a photograph gallery and find a ready-made photograph of myself. Now the facts required by science for purposes of verification are like photographs rather than like hats —highly particularized facts. Science is a finely articulated system in which the facts, if they are to fit at all, must fit exactly. A planet discovered somewhere in the region of the point indicated would, strictly speaking, verify nothing; at best it could only suggest an error in calculation. How then does it happen that even by selection science is able to find the fact that fits? At this point we are referred to Kant's second answer. In the first answer his facts were hard and served only as a basis for selection; in the second they are soft and plastic. Now he tells us that the scientific understanding finds material suited to its purpose because the forms of perception—the forms that put the material into an order of space and time—have already moulded the facts for just this purpose. In other words, the original material as it first reaches the mind is so indefinitely plastic as to be available for any categories whatsoever. I need not carry the point further. Standing before a block of marble Michelangelo exclaimed, "I see an angel in the marble." Of course he might just as well have seen a devil. In like manner, according to

Kant's second answer—and James gives the same answer—the scientist sees a system in the world. But his system has just the same measure of truth as Michelangelo's angel.

And so Kant leaves us the problem: if the facts of the world are hard how does it happen that science is able to satisfy its needs? But if the facts of the world are soft does not the scientist really create a world of science?

I have put the question in this form to call attention to the fact that the problem of the interpretation of science as conceived by Kant is still the problem that confronts us today. Some years ago M. LeRoy raised the question, Does the scientist create science? And Poincaré's *Science and Hypothesis,* the most brilliant and original contribution in recent years to the theory of science, is an attempt to answer his question. No one who follows Poincaré's argument and notes the difficulties into which he has fallen can fail to see that it is Kant's problem again, only at a more advanced stage. The main difference is that in the later discussion Kant's form and matter are replaced by hypothesis and fact. A clearer psychology enlightened by the conception of evolution has shown that we do not approach our world with a set of fixed *a priori* forms, but rather that the work of the scientist is a never-ending activity of forming and reforming hypotheses. It is now reasonably clear that an hypothesis of some sort is represented in every statement of fact.

For the matter of that, we can see that a particular hypothesis of cause and effect is implied in any ordering of facts in time. Men of science sometimes tell us that an order of cause and effect is given with the facts. But you have only to consult a day's experience to see that only in the fewest of that day's happenings do you perceive either cause or effect. Most of them pass without raising the question. Others are of the sort in which you hear your door-bell ring but see no one press the button. You may take the trouble to ascertain from your visitor that he really did press the button; but then you make use of an hypothesis to put his experience in the same order as your own. Often you experience the effect before you experience the cause. But in most cases the cause, or the effect, is simply inferred. When you do experience both it is because your mind is definitely prepared to expect a specific effect—as when you press the button at your neighbor's door and listen for the sound of the bell. I could carry the analysis much further. But the last example will be sufficient to mark the point. For the main difference between scientific investigation and the observations of ordinary life lies only in this: that the scientist makes a more deliberate search for his facts and makes his search with a more definitely formed hypothesis of what he is to expect. Yet at the same time he is suspicious of facts that are discovered as the result of expectation. How then are we to conceive the relation between the scientist and his facts—or better, between the scientist and his object? What is it that distinguishes truth from an illusion of expectation and yet responds to the expectation? This is our problem.

I may begin then by saying that, in the treatment of the problem, we shall put the natural scientist and his object into the background and study their relations in the light of what at first glance appears to be a totally different situation, namely, the personal relation in which one man deals with another. We shall see, I think, that the same logic rules the two situations. But first I must say a word or two to justify this mode of procedure. And first of all I will call attention to the fact that the discussion of knowledge is beset throughout by the crudest sort of metaphor. Not that we can dispense with metaphor. But it should seem that the philosopher at least might be able to handle his metaphors critically, and that he, of all persons, should not forget that his choice of metaphor indicates infallibly his attitude towards his object. The figures applied to knowledge seem to me to be almost without exception vulgar; and intellectually vulgar. Kant's exposition of the relations of form and matter is a constant struggle to escape the consequences of supposing that the human mind is literally a mould into which experience is being poured. At the same time he is endeavoring to see how a mould can handle a solid and hard fact. More, but not much more, refined is the metaphor implied in holding that the relation of knowledge and fact is a relation of "one to one correspondence." Mr. Bertrand Russell reveals the figure when he tells us that this is the sort of correspondence which a catalogue bears to the things catalogued. The scientist uses the same figure when he speaks of nature as "a great storehouse of facts"—in other words, as a huge library in which each book has its eternally determined place upon the shelves and of which knowledge is a card-catalogue, a "one to one correspondence." Such a correspondence may have various forms: the facts may be catalogued for various needs. But so long as the facts remain hard, eternal, and unalterable, it is always a matter of question whether a given need can be satisfied by even the most ingenious arrangement of the catalogue, and nothing short of a miracle when the needs are as fastidious as those of exact science. In the meantime we do maintain an even finer correspondence with our fellow-man; and yet it is only a caricature to call him either a storehouse of facts or a card-catalogue of ideas.

This leads me to a second observation. Our post-Kantian psychology has dispensed with the Kantian moulds and discarded the Kantian machine-shop. It has even here and there suggested that science is an activity of persons. But on the side of the object it has preferred to stick to the facts that seem distinctively hard. When you ask the philosopher for a concrete illustration of the process of knowing, almost invariably he presents you with the case of knowing an inanimate object—preferably a table or a chair; something objective and "solid." At best he will compromise in favor of a green tree. This sort of knowing he conceives to be typically "simple"; and from this sort of knowing he derives his ideas regarding knowledge in general. Now we have just noted that the apparent hardness of these natural facts is the source of all the difficulty. And in the meantime we are not limited in our knowing to the facts that are hard. For the truth is that a great part of our knowledge, and perhaps the most interesting part, is occupied with such relatively flexible and approachable facts as our fellow-men. Let us not forget that, whether or not we love our fellows, we do know them. And perhaps we know them much more intimately than we know the tables and chairs. At any rate, I think that this field of knowledge is sufficiently interesting, and sufficiently unexplored, to warrant the question whether a study of the process of knowing our fellows may not throw a new light upon our knowledge of nature.

But this introduces a third observation. For as soon as we speak of knowing our fellows, we are confronted with the vast activities of the so-called "social" sciences, anthropology, psychology, sociology, economics, all of which purport to deal with our fellows, and among which economics in particular would seem to rank, in mathematical exactness, with the science of physics. And at first glance this comparison seems to tell us that the knowing of our fellow-man makes no difference in the process of knowing and throws no new light upon the relation between the scientist and his object. For there is perhaps none of the sciences which claims to view its object with so sublime a detachment, so complete a divorce between theoretical truth and practical desire, as the science of economics. Among those who deal with the problem of human life no one surpasses the economist in asserting that our conduct is regulated by laws which bid defiance to personal desire. In other words, in economics the object is as hard a fact as it is in physics.

This, however, would seem only to prove my point, namely, that knowledge of our fellows is a higher grade of knowledge. For the truth is that the economist is dealing specifically with those men whom, relatively speaking, he does not know; or, to state the point differently, he is describing the conduct of men in those relations in which they know one another least intimately. In gathering his facts about the world of commerce the economist prefers to assign a secondary rôle to personal acquaintance and observation in favor of economic statistics. His economic laws describe the conduct, not of Peter or Paul—not of any real or particular person, but only of the average man—who is always the distant man. For it would never occur to you to conduct a statistical inquiry or to consult a scientific law, to discover whether your wife liked her roast-beef rare or well-done. Nor, in a transaction with a friend concerning a horse or a motor-car, would you care much about the market-prices; the main question would be whether the bargain was mutually satisfactory. But the economist is not interested in a transaction purely personal, whether it be a "friendly transaction between gentlemen" or primitive barter. It must never be forgotten that economics is both logically and historically the science of *modern* commerce; of commerce on a large scale, in which the ultimate producer and the ultimate consumer are widely separated. This fact of distance is directly responsible both for the "scientific" aspect of commercial transactions and for the impersonal character of economic science. The economist describes the distant man. And the economic man, whose actions are determined by economic laws, is hardly more of a person than the billiard-balls, which move in accordance with the laws of mechanics. At best we can say that he holds a half-way position between a person and a thing.

If, however, our human fellows tend to become hard and impersonal facts in proportion as they are distantly known—in proportion as they are known, not as Peter or Paul, but simply as capital or labor, demand or supply—may we not suppose that the impersonal and very hard facts of the physical world are connected with their being still more distantly known? And then must we not say that the true type or example of knowing is to be found where one person joins hands—or joins issues, as the case may be—with another and deals with him face to face? At any rate, I propose to examine this personal relation as a type, let us remember, of knowing in general.

Among the motives implied in the personal relation, I hold that an indispensably important motive is that of satisfying yourself. In terms of pragmatism, this is the need or the self-interest of the knower. I am aware that the doctrine is unfashionable; and that the conventional view is that which bids us sacrifice ourselves for the larger good of others. Virtue, which formerly stood for a willingness to be damned for the glory of God, still asks us to be damned for the glory of society. Yet, even from among the most insistent advocates of self-sacrifice, I could summon a cloud of witnesses. Even so "disinterested" a moralist as Kant finds it necessary to affirm that no moral law can be binding upon me which does not satisfy myself. Every theory of moral obligation refers to some kind of self-interest, however unsubstantial. If God has nothing for me then I can have no obligation towards him. If my fellow has nothing to say to me then I can have nothing to say to him. If he cannot interest me I cannot know him—there is no basis for a personal relation.

But now, just because I am bound to satisfy myself, it is indispensably important that I should satisfy my fellows; certainly the fellow from whom I expect a service. I cannot expect him to serve me unless I offer him an inducement. Again I am aware that many persons will claim that this is quite unnecessary; that I may compel him or deceive him into serving me while leaving his own interests out of consideration. But I think that this view fails to consider the conditions of getting the best that your fellow has to give. From the greater number of our fellows we cannot expect to get the best. To get their best we should have to know them well; and our powers of attention and of imagination, our capacity for life itself is too limited for the task. And if we do not deliberately deceive or coerce them we at least cheerfully profit by their misfortunes; when a merchant has overestimated the market we are ready to buy below cost. But this is all in the direction of the distant economic world. In the world of personal relations it is still true that when I set out deliberately to cultivate one of my fellows and to procure for myself the best that he has to give, I can only enjoy his best by a careful consideration of his needs and by doing my best to satisfy him.

This gives us the terms of our problem. In any statement of the situation there are two demands to satisfy, my own and those of my other. In the scientific situation there are two similar terms: the scientist's demand for intelligibility, and his obligation to satisfy the object. Nothing will solve the problem which fails to fulfill both demands. Any mere compromise, however justified by the necessities of immediate action, will fall just so far short of truth. By what process, then, is the solution to be reached? Looking once more at the personal relation, we may see that the ordinary process of solution—and I shall call this the logical and moral process—is a process of bargaining, or, if you please, of negotiation. And again I expect to encounter the objection that bargaining is the method of small minds whose object is to get the best of one another. But this, I reply, is the bargaining of the mean and the stupid whose imagination is too torpid to demand an exchange of the best that they have to give. Or perhaps it refers to an economic situation in which the only question is a question of price. So far as this is the case there is really no opportunity for a bargain. Bargaining presupposes the possibility of receiving from your fellow an alternative proposition in which the demands are, not necessarily fewer in amount, but different in kind; in which, for example, I refuse to give you my horse for your cow but may offer you a few sheep? This opens the way for further discussion. And when we look at the matter in this light we see that the conception of a bargain applies to all of our personal relations, from the most material to the most spiritual; and further that a truly satisfactory bargain, in which the demands of both sides are finally fulfilled is both a triumph of intelligence and a work of art. But truth is precisely such a bargain. When, after a process of experimentation, you can say, "This is the positive fact; and this is, moreover, just the fact that my hypothesis demands"—then you have the perfection of truth.

Suppose then that you have begun by making a demand upon your neighbor, and suppose that your demand has been flatly denied. At this stage you are confronted with what we may call the brute fact. You are in the case of the scientist whose hypothesis has been blankly contradicted. But in dealing with your human fellow—unless he be an economic fellow, a merchant whose price is fixed—you never accept an unwelcome fact as finally and absolutely "hard." For such a fact is wholly unsubstantial and characterless apart from its motive or meaning. To refuse your son the price of a bicycle may have any of a dozen meanings, from a careful regard for your own pocket-book to a fear of his breaking his neck; and a properly alert lad would treat the refusal only as an invitation to "try it again."

Hence you try it again. But here I may remark that, except in the economic world, where prices are fixed, your first offer is not likely to encounter an absolutely flat refusal. It is more likely, for example, that an invitation to luncheon will be declined with the statement from your friend that his work will not permit him to accept an invitation for the middle of the day. Now if you were not yourself a working man, the statement would excite a feeling of wonder; as if a man should tell you that he never thought of sleeping at night; or the sort of wonder with which astronomers first regarded the spots on the sun. As it is, the statement enables you to interpret the refusal; and at the same time his refusal ceases to be an inflexibly hard fact and becomes a suggestion of a counter-offer: perhaps he would be glad to come to an evening dinner. Or, if this is impossible, then, better still, perhaps he would join you for a Sunday in the country. I need not carry the illustration further. In more important matters a personal negotiation may assume the dimensions of an extended scientific investigation, even with all the advantages afforded by ready communication. What I wish to note here is that the logic of the two processes is the same. The scientific method of trial and error is only another case of negotiation. But in the personal relation the possibility of a new trial, after a first trial has resulted in error, depends wholly upon this: that you may interpret your failure, not as a hard fact, but as a new suggestion, because of the light afforded by your own motives. This important point I shall recall later.

Perhaps you may object that all of this refers to practical life rather than to knowledge, to ethics rather than to logic. But one of the great advantages of this personal relation is that it so clearly illustrates the pragmatist's doctrine of the identity of doing and knowing. The process of bargaining seems at first glance to be only a crossing of swords or a trial of strength; but a trial of strength between intelligent men is only another name for the process whereby they arrive at a sympathetic understanding and mutual independence. This trial of strength is the very life of the process even in theoretical knowing. It is no mere accident of literary fashion which puts Plato's philosophy in the form of dialogue; nor does mere imitation account for the fact that others have vainly tried to follow him. The dialogue is an attempt to present what may properly be called the living truth, or truth in the making; and the art of dialogue is just as fine an art as that of presenting a living form upon canvas. The getting of truth, in other words, is a process of conversation, of question and answer; or, if you please, of dialectics. Mere reading of a book will never give you the ideas of the author. You must have a question to ask and a position to defend if you are even to read him. But when you have put your question, then the reading becomes a process of conversation. The first question brings out an answer and the answer a new question, and so it goes, back and forth, until at last you are able to say where you and your author stand with relation to one another—and the satisfactory determination of this point is truth.

With this personal relation now before us, let us note how the logic of the relation fulfills the demands both of the pragmatic theory that truth is always being made and of the realistic theory that truth is independent. First, we have noted that in the personal relation all is being made—not only the agreement which constitutes the truth, but the terms between which the agreement is formed, the knower as well as the object of his knowledge. Only in the process of making your object clear do you bring to clearness the needs and demands for which you are ready to stand. In no other way can you arrive at this knowledge of yourself. Suppose that some one asks me, Are you a realist? How do I know if I have never seen a realist? Let me make the acquaintance of Mr. Russell, Mr. George Moore, Mr. Perry, Mr. Montague, or perhaps of Mr. Santayana, and then I shall hope to tell you both whether I am a realist and what kind of a realist I am.

Yet in any case I shall try to be an independent realist. For once more I repeat that the final agreement which we call truth is no mere "adjustment," no mere compromise effected by rounding the corners of a square peg to make it fitter for a round hole and at the same time squaring somewhat the shape of the hole. So far as the agreement is a matter of compromise, thus far is it false. And this we must hold to the extent of admitting that truth in its perfection is rarely or never attained. It may indeed be said then that in entering a negotiation I cannot yet say precisely what I want; that, for example, I cannot choose my gloves until I have tried them on. It is none the less true that the gloves that I choose are the gloves that I want, and even, if you please, the gloves that I set out to buy. The realism that I adopt is a realism defined after a process of objective investigation. To me the whole question of realism may be more or less new. But it is not my realism unless it reveals itself as the philosophy which I have all the while been seeking. In a word then, there is no truth unless each party to the transaction remains true to himself. In a satisfactory agreement both the knower and the object must be independent beings.

And finally, since the independence is mutual let us not forget to mark the independent object. In this personal relation truth is being made; but if I am not made by the object of my knowledge, neither is the object of my knowledge made by me. To Walter Pater Plato is a lover of beauty, to Mr. Russell he is an abstract realist, to Professor Paul Shorey a man of critical common sense like John Stuart Mill. Plato may (or may not) be any or all of these; and it is certain that Plato has given no finally consistent response to all ways of taking him. Nevertheless, amidst all the variety of response there is a certain unity of personality which is Plato's and which is not made by the way he is taken. Granting that every fact about a man is a function of the demands made upon him, it is still true that throughout the widest variety of replies he may be personally consistent. He may even realize the Kantian ideal of a consistency equal to that of the law of gravitation. So far as he shows any self-consistency whatever he is an independent being.

VII

INTELLECTUALISM

I SHALL begin by calling myself an intellectualist. Provisionally, that is to say; for I am also, if you please, and possibly a more interested, romanticist. And what I shall call myself at any given moment will be a question of the person to whom I am speaking, the challenge that I am meeting, and the question to which I am asked to reply. Such indeed are the considerations determining the meaning of a word in any actual use of it, whatever be the meaning recorded in the dictionary. I could doubtless settle the question of words by calling myself (if there be such a word) an "intellegencist," i. e., a believer in critical intelligence. But, apart from the strangeness of the word, "critical intelligence" is just the question that I have in mind; and to get at the meaning of this I prefer to begin with the "intellectual" motive.

As an intellectualist I shall say that I believe in analysis without end. I believe in looking a gift horse in the mouth, in letting one's right hand know what the left hand is doing, and in allowing no respect for persons to interfere with an analysis of their personal character. I am aware that to many persons this will mean that I am a kind of adding-machine, cold-blooded, and without a living soul. I contend, on the contrary, that apart from such analysis there can be no activity of soul. Yet when I survey the conventional types of intellectualism, as represented by the intellectualism of modern science and the intellectualism of the mathematical logic, it seems to me that the intellectualistic claim to a soul stands in need of argument. I am also perplexed by finding illustrations of acute intellectual analysis amidst the ostensibly anti-intellectualistic philosophy of M. Bergson. And to crown it all we were told that German "intellectualism" was responsible for the war. This seems to show that intellectualism is itself in need of analysis.

I

In any discussion of intellectualism we confront the issue between intellectualism and intuitionism, or, if you please, romanticism. Let us not forget that both intellectualists and intuitionists are seeking higher spiritual levels, and that for both the higher spiritual level stands for a closer contact with reality. They differ according as they hold that intellectual analysis reveals reality or veils and distorts reality. The romanticist believes that his intuitions, impressions, feelings, insights, however they may be named, both bring him into a closer touch with reality and raise him to a higher level of spiritual being; to which the intellectualist makes the scornful reply that the romanticist conceives his "emotions" to be more intelligent than "ideas."

And herein, as I conceive, lies the crux of the whole matter, in the traditional and easy distinction and separation between "emotions" and "ideas." These "emotions" and "ideas" are presented to us as entities quite as hard and tangible as their metaphorical representatives, "the heart" and "the brain"; and they seem to be quite as definitely located in different "parts" of the soul as the heart and the brain are located in different parts of the body; only, it seems, rather less in communication. The more I meditate upon this distinction of "emotion" and "idea" the more I am compelled to wonder. When I try to imagine an emotion divested of idea or an idea divested of emotion I seem to find nothing that is either spiritual or intelligent. Yet upon this mythological division, as I see it, is based an absolute separation between a world of taste and feeling and a world of knowledge, each striving to keep itself "pure" from contamination by the other and each claiming a certain superiority, the party of emotions conceiving themselves to be more "spiritual," the party of ideas conceiving themselves to be more "intelligent."

It is in reply to the first party that I call myself an intellectualist. When I try to make clear to myself the essence of spirituality, I find myself confronted always with the fundamental contrast presented by the locomotives and the waterfalls, which move but are not conscious of moving; the barnyard fowls, which seem to be only darkly conscious of what they are doing and where they are; and our human fellows, who show in widely varying degrees a clearer consciousness of living, which, however, falls always far short of being perfectly transparent. And when I try to define our spiritual strivings, or, as a romanticist might say, our strivings for a greater measure of "life," it seems to me that, whatever else is implied, they all point in the end to the fundamentally spiritual struggle for a greater *consciousness* of living. The heaviness of the flesh, for example, is the heaviness of darkness and confusion among groping instincts; and the freedom of spirit for which we all yearn is the freedom of a clear self-consciousness with regard to our desires. To live, not by the blind impulsion of instinct, but by the light of a clear consciousness of living—this it is that marks us off, though still not absolutely, from all other creatures; and this I take to be the distinctive mark of "life," "freedom," and "spirituality."

But at its lowest terms this consciousness of living is analytic. If the hen's "reaction" to her chicks is different from her reaction to her neighbor's ducklings, and if the difference between chicks and ducklings makes any difference in her consciousness, then I say that the hen is guilty, however slightly, of the logical process of distinction and identification. And if the logical element is absolutely nil, then to me the hen's "instinctive" reaction differs in no essential feature from the instinctive reaction of my typewriter, which always writes "a" when I strike the key marked "a." Consciousness without analysis, spirituality without intelligence, I hold to be a contradiction in terms; abstract all intelligence from a movement and nothing is left but a bare mechanical fact.

The same is true upon any higher plane. When the romantic lover of music tells me that he disdains all constructive analysis of a symphonic movement into themes, introductions, recapitulations, or what not, on the ground that analysis interferes with enjoyment and dulls the sense of spiritual meaning, I am compelled to wonder how it comes about that he attaches a different meaning, say, to Bach's Fugue in G minor and to the Prelude of Lohengrin, and why it should make a difference to him whether the orchestra plays a symphony of Beethoven or a symphony of Cesar Franck. And if he takes his stand upon the difference in feeling, then, while admitting the difference, I shall still have to ask him how feeling differs from digestion and the enjoyment of music from the enjoyment of wine. To my view the difference between feeling and digestion lies in the fact that any feeling, even the feeling of alcoholic stimulation, contains the quality of intelligence; abstract all intelligence from the feeling, and what is left is a bare physiological state. And in like fashion the enjoyment of beauty differs from the enjoyment of wine by the presence of a finer activity of intelligence; abstract from the finer intelligence, and one form of intoxication is as spiritual as another. If I am to take Brahms or Beethoven merely as stimulants to emotion—well, for that purpose I will choose the wine. But by intelligence I mean always some sort of analysis.

II

At this point we face the romanticist's stock objection: namely, that the effect of analysis is to convert a living reality into a bundle of dry bones. And when we survey the results offered by the conventional forms of intellectualism it appears that the objection is not without ground. Indeed, it looks now as if we stood between the devil and the deep, mysterious sea. For how shall we come into spiritual touch with the world except by making the world distinct? Yet it seems that the moment we adopt any of the more formal methods of making the world distinct, we find ourselves driven by an irresistible logic to a world which is at best the ghost of the world of living experience.

Such, it strikes me, is the world offered by modern science—so far, at least, as modern science, not content with the pragmatic rôle of guiding us from one immediate fact to another pretends to introduce us to ulterior realities. Viewed in this light, modern science is now perhaps the chief among the recognized exponents of intellectualism. Now according to modern science the fundamental condition of intellectual analysis is that it shall be impersonal; the world of our experience must be purged of all traces of interpretation, personal or human. But very curious results seem to follow. As I rise in the morning I see before me the Sierra Madre, her rugged surfaces, pierced by deep canyons, presenting a splendid mosaic of blue, green, and purple against the early sun; a whiff of the eucalyptus comes to me as I take a deep breath; and to my ear the twittering of birds. Such is the world of my experience, an interesting world if not always attractive. I submit my world to the analysis of science—and behold! Not only of course does the Sierra become an inert, insensitive mass, but it now turns out that all the marvelous displays of color are but so many agitations of a formless ether, differing from one another only in extent and rate. The songs of the birds are but so many agitations of the air. The odor of the eucalyptus means only that some minute particles, in themselves odorless, have impinged upon my nostrils. In the world of scientific analysis there are no colors, no tones, no odors, no tastes, but only—what?

In the last analysis, no one seems to know. Motion, it seems, is certainly there; yet in the analyses of recent years motion shows a tendency to swallow all that there is to move. Ostwald to the contrary, it seems that energy can hardly be there; for energy is an interpretation of change by our sense of muscular effort. And by the same token there should seem to be no trees and no mountains. For if you pause to think of it, a tree is only a collection of particles—or of centres of motion, or what not—distinguished by us from the surrounding atmosphere, which is likewise composed of particles, by the vulgar fact that our senses note difference of color and hardness. Scientific analysis assures us, however, that both the color and the hardness are subjective impressions, and that the real difference between the tree and the surrounding air is that the particles of the tree are less volatile and closer together; which being interpreted seems to mean that the tree is in the last analysis an artificial group of particles, distinguished for human convenience, like the bear in the stellar universe and the man in the moon. In the mind of God—the God of natural science, who, being untroubled by motives of convenience and subject to none of the limitations of the senses, regards the world from a standpoint strictly and exclusively scientific—there should be no more thought of a tree in the field than of a man in the moon. In other words, to the mind so unfortunate as to realize the scientific ideal the world would be a formless mist of mathematical points.

Such, it seems to me, is the intellectualism of scientific method when carried to its intellectualistic conclusion. A similar result appears when we apply the same treatment to the new mathematical logic which, under the marshalship of Mr. Bertrand Russell, has been asserting imperial rights over the domain of thought. The point is not that the world, or worlds, which these schools offer us are extremely uninteresting—though I am not ready to admit that this would be an invalid objection—but that they are vacuous. The scientific method offers us the conception of a "block-universe"—something apparently very solid. The mathematical logic resolves you and me, and all the rest of creation, into *quasi* number-series and geometrical patterns—conceptions apparently very clear. But these conceptions mean only that the method has not done its worst. When we analyze the block-universe a little further the blocks appear to lose their solidity and to pass into mere patterns or series; and presently the patterns and series, released from the individualizing limitations of human interests, begin to exhibit the uncertain character and the unexpected transformations of the patterns of wall-paper when we are slightly fevered.

With this type of intellectualism before us we may perhaps comprehend, even if we do not accept the anti-intellectualism of M. Bergson; and we may even sympathize with his preference for intuition. To understand his position it may be well to remember that this mathematical intellectualism is peculiarly characteristic of what we call "the French mind"—it is certain that evidences of it are to be found everywhere in French philosophy and French literature; and further, that the French mind never hesitates before the "logical" conclusion. M. Levy-Bruhl has remarked that, while English philosophers have been mostly men of the world and German philosophers mostly theologians, most of the French philosophers have been mathematicians and physicists. M. Levy-Bruhl has himself illustrated the mathematical type of mind by distributing all the world between the races that think according to the law of contradiction and the races that think according to the equally definite "law of participation." Nothing could be neater unless it be the household budget of one of the characters in Balzac's novels, or, better, the composition of the character itself. In Balzacian "realism" each individual develops his special quality and attitude with the clock-work precision of a mathematical demonstration. M. Taillefer loses his son; on the same day he sends for his rejected daughter; *quod* *erat demonstrandum.* This is French intellectualism applied to the analysis of human character; and the result borders upon the grotesque. Hence it is that Bergson restricts intellectual analysis to the humbler function of making our living. In his view an intellectualist is one who sees all of life from the standpoint of a mechanical engineer.

To my view the ground of criticism lies deeper. Before rejecting intellectualism as intellectualism, it is well to inquire how far the motive and process are intellectual in the sense of being intelligent. And my criticism would then be that the intellectualism of scientific method and mathematical logic ceases to be intellectual just at the point where scientific method becomes a settled philosophy of life. We have to remember that the essence of such intellectualism consists in a stoically rigid adherence to rules of thought which have been formulated once for all. Now I hold that where rules of thought become once for all fixed, thought ceases. And if you protest against the absurdity of applying such a suggestion to men of the intellectual status of mathematicians and logicians, then I shall point out that the chief function both of logicians and of mathematicians is to formulate rules for others to use. To develop a rule, or formula, of logic or of algebra, may be a process of an intellectual analysis;

to follow a rule is a process relatively mechanical; only an unconscious mechanism can illustrate a rule completely.

The point may be easily illustrated by reference to the rules for using logarithms: add or subtract the logarithms and you perform a process of multiplication or division upon the corresponding numbers. Now to grasp the rationale of this rule is clearly a process of intellectual analysis. But the very purpose of formulating the rule is to spare ourselves this strain upon the attention. Indeed the whole purpose of mathematical formulæ, as any mathematician will explain, is to effect "economy of thought." And we need not deny that in the economy of life as a whole this is a most necessary purpose. But this only serves to show that when the rules, whether of algebra or of logic, have begun to fulfil their economic function thought has so far ceased. In point of fact, few of the thousands who use logarithms could give you a reason for the rules; strictly speaking, they do not know what they are doing. In this respect the logarithmic calculator differs in no essential feature from the familiar adding-machine. If the human calculator is to be credited with intellectual analysis, it seems unjust to refuse the same credit to the machine.

III

But if this is a false brand of intellectualism, then in what does a genuine intellectualism consist? Perhaps I can best explain by adducing the so-called German "intellectualism" as a "horrible example" of what intellectualism is not. To the philosophers it seemed that more than political issues were involved in the war. Very commonly it was said that scientific "intellectualism" was at war with a less intellectualistic "humanity." And even those who opposed Germany upon moral grounds seemed compelled to admire the intellectual splendor of her organization, complete "to the last shoe-string."

I did admire, but my admiration was much qualified by the thought of other things. More important for the German calculation than shoe-strings was the attitude of the rest of the world; and at this point it seemed that the calculation wholly failed. The Germans were evidently disappointed when England decided to fight. They were both surprised and pained when Belgium declined their polite request and rejected their equally polite reassurances. They were again pained to learn that, in spite of a traditional good will, moral sentiment in America was overwhelmingly against them. And their bland offers of German culture to the friendly

Scandinavians seemed only to create suspicion.

I prefer not to talk about "the German mind"; but the truth seems to be that with all his science the German was unable to grasp the point of view of a non-German mind; least of all could he see himself as reflected in that mind; and just for that reason he was unable to take a sane and balanced view of himself; he was lacking in critical intelligence.

This critical intelligence I take to be the essence of any genuine intellectualism. It is because of their rejection of such criticism that I decline to admit the mathematical and scientific intellectualists, and with them all the intellectualists who take their stand upon "pure logic," to the higher order of intellectuals. Far be it from me to make light of mathematical and scientific analysis. I doubt, at least I very much wonder, whether there can be any process of analysis, any movement of thought, which will not add both to our knowledge of ourselves and to our knowledge of the world. But I insist that, if intellectual analysis is to maintain its intellectual character, if it is to continue to be a process of thought, then it must keep ever in mind both the process of analysis and the point of view from which the analysis is made; and these ever-developing considerations I hold to be determining, not merely for a knowledge of self, but for a realistic knowledge of the world.

The intellectualism of modern science stands for an attitude precisely opposite. I am referring now, not to the personal attitude of scientists, which may be as critical as you please, but to the official point of view of "modern science." The fundamental contention of modern science is that it deals with positive facts, finally disentangled from the warping influences of human points of view. Science must then ignore all points of view if positive science is to be distinguished from theoretical, not to say romantic, speculation. Accordingly, the scientist never, except by courtesy, says, "I think"; he uses always the impersonal "is." For what he thinks has nothing to do with what is true.

From the standpoint of a genuine intellectualism, this is naïveté; and naïveté means that intellectual analysis has come to an end. He who has abstracted from the fact of his thinking has ceased to think; and when his point of view is buried out of sight, he is no longer in position to make an objective judgment of the world. For in the last analysis we can never get rid of our point of view. And error arises, not from the operation of a personal or human point of view, but from its unconscious operation.

VIII

REALISM AND THE REJECTION OF CONSCIOUSNESS

IN the following I shall venture the suggestion that the motive underlying the so-called realism is a distaste for consciousness, and especially for the humanistic implications of consciousness. I shall illustrate the point by reference to the "new realism" of recent philosophy, with a side-reference to the realism of fiction.

I

The new realism was formally presented to the world in 1910 in the form of a "Platform" signed by six philosophers of Harvard, Columbia, and Princeton. Among the purposes of the platform was the laudable one of emancipating a bored philosophical world from a bondage of more than two centuries to the obsessions of "epistemology." The chief of the obsessions, which we inherit both from Descartes and from Locke, is the idea that we are certainly in possession of our mental states but only doubtfully in possession of the objects supposed to be represented by them. As a result of this obsession, we find ourselves in the position of a man who holds an elevator receipt for wheat, which he may exchange for a similar receipt—for wheat or for gold, or what not—but which can never be made to produce anything but another representative document. Is there then an external or "real" world? The question seems hopeless. Either the problem is meaningless or the assumptions need to be revised. The new realists have undertaken to revise the assumptions.

But not content with destroying "epistemology" by forbidding all discussion of the theory of knowledge, the new realist extends his attack to "idealism." Every one has use at times for some term of malediction. I have heard of a little Quaker boy who called his antagonist "a nasty little you." A new realist would have called him an idealist. And in his view idealism is exhaustively defined in the statement that "the being of things is their being known." This doctrine has usually been distinguished by philosophers as "subjective idealism." It is a question whether the history of philosophy affords an example of a philosopher who has subscribed without qualification to the subjective limitation. Berkeley, who usually plays the part of "the idealist" in the neo-realistic drama, appears to have been less interested in denying the existence of things independent of our perception than in proving that they could not be "inert" and "unthinking" things. Nor does it appear that, if we deny that the being of things is exhausted in their being known, we must affirm that being and being known are unrelated. What happens to a thing in being known is a nice and complicated question. The new realist is, however, averse to complications, and finds it simpler to leave knowledge out of the question.

And since knowledge is included in the more comprehensive conception of consciousness, it will be still simpler if consciousness can be reduced to a position of insignificance, or perhaps of nonentity. This is the point at which the neo-realistic argument against idealism and epistemology is reinforced by the argument for the relational theory of consciousness. So far as I know, the origin of the relational theory is to be found in an essay by William James, bearing the suggestive title, "Does Consciousness Exist?" It is a rather curious reflection that, while most modern philosophy assumes as beyond question that we know our states of consciousness better than we know the things of which they are conscious—a view which also seems inescapable to the first reflections of common-sense—yet few persons even pretend to tell us what a state of consciousness is. We know what a table is, but what is an idea of a table? And how does it differ from a real table? James answers the question by telling us that in substance there is no difference. Our experience yields us but one kind of table, which has to serve both as idea and as real table. It is then one or the other, according to its "context" or relations to other items of experience. Thus (to change the illustration) a pile of building material may be followed immediately by the vision of a house; or the house may come some months later as the final term in a series of causal transformations necessary to convert the materials into a house. In the first relation both materials and house are states of consciousness; in the second they are objective facts. Apart from these relations they are neither; in the language of neo-realism they are "neutral entities."

According to this view, consciousness—that is to say, you and I—is merely one of countless possible "relations" in an impersonal world of neutral "experience." With regard to the precise character of the consciousness-relation, neo-realistic opinion is divided; and the variety of formulation leads one to suspect that the difficulty of defining consciousness as a relation has been slightly underestimated. By one wing, apparently the left wing, consciousness is defined, somewhat darkly, as a relation of "meaning." The bricks and stones may actually form a house, or they may also "mean" a house—which appears to involve the mystical conclusion that bricks and stones have minds of their own. According to the right wing bricks and stones become facts of consciousness when they are responded to in the "specific manner" of an organism having a nervous system; for example, to say that a brick has become part of consciousness may be only to say that somebody has picked it up. This is in accord with the new fashion of treating consciousness as "behavior." But what may be the "specific manner" of response peculiar to living organisms, is not precisely defined. If it should turn out to be merely an intelligent manner, the work of defining the conscious relation would be still to be begun.

I have in mind a lad whose mother, wishing to let him down gently, told him that, while Santa Claus was not a real person, yet the term might fitly be used to refer to the spirit of brotherly kindness supposed to pervade Christendom annually about the 25th of December. The boy's version, as overheard later, was to the effect that Santa Claus was nothing but a "rotten old spirit." I fear that, in a similar fashion, many naïve persons will accuse the neo-realists of making us nothing but rotten old relations. And they may also suspect that the term "relation" is only a pleasant way of telling us that, like Santa Claus, we really do not exist. This suspicion may be strengthened by the realistic insistence upon the point that consciousness is a rather casual relation, certainly not more significant than many other relations that might be named; and perhaps by the subsequent reflection that the typically relational beings are the man in the moon and the bear in the heavens—from which the relations constituting ourselves appear to be in no wise different in kind. But if any doubt remained, it has been dispelled by Mr. Holt, who tells us that the mission of the neo-realists was to "abolish" this subjective nonsense about "consciousness."

How shall we explain this aversion on the part of supposedly conscious beings to the fact of their consciousness? The answer may be found, I think, in the uncritical reverence displayed by the neo-realists for natural science. Far from accepting the traditional rôle of the philosopher as the critic of science, the new realist aims to win intellectual reputability for philosophy by adopting the scientific point of view. Now from the standpoint of natural science, consciousness is a peculiarly exasperating fact, a fact seriously disturbing to the scientific unity of the universe. The phenomena of animal life may plausibly be reduced to phenomena of chemical change; and the nervous system may then be invoked to perform all the functions of thought. But any admission that these functions are also self-conscious presents an ominous difficulty, amounting, it seems, to an admission that consciousness is supernatural. And consciousness, we may say, is indeed supernatural. It is doubtless very easy as a matter of language to bring conscious agents and unconscious things together under one generous and all-embracing conception of "Nature." Such a conception of nature is too generous to mean anything. From the point of view of natural science consciousness lies outside of nature and conscious control of nature is an interference with nature. It is therefore much simpler (and for science the simpler is always the truer) to banish consciousness from the realm of positive facts and to treat it as an "epiphenomenon." But it will be still simpler if consciousness can be evaporated by definition into a merely casual relation. And this is the service undertaken by the new realism.

II

The new realism is philosophy in the pose of natural science. If we turn to the realistic novel we find art in a similar pose. The *roman experimental* is fiction equipped with all the apparatus of scientific method, a technological vocabulary, a carefully compiled list of facts (only the bibliography of sources is wanting), a disavowal of all theoretical preconceptions and a sublime contempt for all human interests—with the honorable exception of sex. To dwell upon this aspect of realism would be to repeat much that has been admirably said by Professor Stuart Sherman. I shall therefore content myself with pointing the analogy.

Historically the realistic novel is a protest against the older romantic novel with the happy ending—which was always the reward of virtue. The romantic happy ending was due, however, less to the natural productiveness of virtue than to some rather irrelevant beneficence on the part of nature or the social order. Now such a consummation implies that the world is a moral order; indeed a supernatural order. Yet the supernatural is not finally disposed of by the elimination of happy chance. What if, by the exercise of moral courage, of intelligence and foresight, virtue may produce its own reward? This implies the efficiency of consciousness. And this, as I have suggested, is still, from a standpoint strictly naturalistic, to admit the supernatural.

Accordingly, in the strictly scientific novel, consciousness is made ineffective. Either the characters are preternaturally stupid, like the husband of Madame Bovary (and French husbands in general), or they are persons of unusual intelligence whose powers of action are obstructed by introspection. In Russian realism it seems that every one who is not a clod is, like Turgenieff's chance-acquaintance, a Hamlet—a *Hamlet of the District Tschigri* or of some other district. Dmitri Roudine is uncertain whether he is a hero or a humbug. Neschdanoff, in *Virgin Soil,* is a nihilist who discovers in the end that his nihilism is merely æsthetic. Even honest Bezukhov, in Tolstoy's *War and Peace,* is haunted by a constant sense of not meaning what he says. All this may perhaps be true of Russian character. But it seems that in English realism intelligence is similarly inefficient, and indeed especially prone to disaster. Hardy's *Return of the Native,* for example, is a tragedy of seemingly trivial errors. The dominant note of literary realism is the helplessness of man before the accidents of events; and in the realistic world events always go wrong.

So uniformly indeed as to suggest that the dice may be loaded; or perhaps that a *diabolus* may have taken the place of the romantic *deus ex machina.* Following the young Lucien de Rubempre through several volumes of his sordid career, we hope of course to see him win in the end, if only as a fair return for reading so much about him. Just as he is about to grasp success Balzac destroys him by a single moment of self-forgetfulness. In *The Return of the Native* a rather hasty misapprehension sends Yeobright's mother to her death; a little later the wife, Eustacia, would have been saved had she chanced to see Yeobright's letter. In *A Pair of Blue Eyes* we find a rejected and a repentant lover meeting on their way to a reconciliation with the same beloved, both then to be confronted with her dead body. All of this is more suggestive of a bad dream than of real life. In my own experience the world of inexplicable mischance, in which we play the part of paralyzed spectators, is the world of nightmare. And when I note the occasions in daily life when nature and circumstances seem most overpowering and inevitable I find that they are the times when thought is dull and the brain is weary.

It strikes me as significant that much of Hardy's world is the semi-hypnotic world of his brooding and mystical heroes, the world, not of clear consciousness, but of semi-consciousness.

For in waking life it seems that our consciousness of living does enable us more or less to control the order of events; just so far indeed as we have a clear grasp of our situation and a clear self-consciousness with regard to our motives. The world of real living is not inevitable nature, but nature more or less responsive to our purposes. *Natura parendo vincitur;* by coming to terms with Nature we make use of her; and the resultant real world is the fruit of a transaction between two parties. The fault of the happy ending of old-fashioned romanticism was not that it was happy but only that it was gratuitous; there was no transaction to support it. I have in mind, for example, Octave Feuillet's *Roman d'un Jeune Homme Pauvre*—the story of the young and impoverished marquis who is too proud to propose to the wealthy maid while he himself is without fortune. The problem seems insoluble. But happily an apparently worthless legacy turns out to be worth millions. This of course is merely stupid. And it is wholly unreal. Yet it is equally unreal to suppose that, if man and maid are quite in earnest, they are going to be deterred by the etiquette of fortune. In real life love usually finds a way; and the happy ending is both the logical and the natural conclusion. In real life few romances are shattered once for all by the fact that the young lady is not at home when the young man calls primed for a proposal. Obstacles are overcome by ingenuity. The task of the novelist is then to provide the ingenuity, and to make it a logical and clearly motived ingenuity. To solve the problem by a *deus ex machina* or, on the other hand, to treat it as essentialy insoluble—both courses are alike unreal. The realism that chooses the latter is no truer of actual life than the romanticism that chooses the former. Such realism describes life, not as life is, but as it ought to be from the standpoint of natural science.

III

A similar situation confronts us when we return to the realism of philosophy and science. Realism claims the special support of common-sense, assuming, evidently, that common-sense is both simple and clear. But we need only glance at the common notion of the real to perceive that it is complicated by at least two motives. If anything is to be called real (rather than merely imaginary) it must be in some sense independent of the person who perceives it; that is, it cannot be wholly his own creation. On the other hand, nothing can be called real which is not in some sense, actual or potential, a part of our immediate human experience. And an experience is called "very real" when it is a vividly conscious experience and gives us a sense of close contact with the object.

Realists appear to assume that common-sense will be satisfied with exclusive emphasis upon the objective motive. Realistic science, which is the model for realistic philosophy, makes a special point of emancipating the objective reality from all human interpretation. The first thing that a novice in science must learn is to forget that nature is offended by a vacuum or that the iron loves the magnet. Realistic science then goes further and emancipates the reality from human perception. The novice learns that what he took to be color or sound is really only vibration; that heat is really motion; that indeed nothing is "really" just what it is perceived to be. This apparently solid matter turns out in the end to be a collection of countless independent atoms, which a popular imagination takes to be so many colorless (i. e., gray) microscopic billiard-balls, but concerning which it seems that science can tell us nothing that is intelligible in terms of concrete experience.

But a reality wholly unrelated to experience is a little more than even realism wants. Such a reality savors of "metaphysics." Now, therefore, we learn that science is especially distinguished by the fact that she alone keeps close to actual human experience. It now turns out, somewhat unexpectedly, that matter and energy, atoms, ether, and vibrations, were not real atoms, or what not, but only so many shorthand devices for stating the order of events in experience. In a word, science is nothing but a record of what we perceive. But lest this should appear to imply an abandonment of the impersonal principle, we are carefully informed that the character of what we perceive is wholly unrelated to the circumstance that *we* perceive it. Realism, in other words, abjures metaphysics and stands for human experience, but conceives human experience to consist of unvarnished fact.

To me this means that realism stands for denatured human experience. For without denying that something is meant by an unvarnished fact, it seems to me that the phrase as it stands amounts to a contradiction in terms. A fact distinguished, defined, characterized—characterized even as fact

—is never unvarnished. I may distinguish the fact as presented in your varnish from the fact as it is presented in mine, and thus, by allowing for your varnish and for mine, procure for the fact some measure of independence. But a fact without any varnish whatever seems to me, if facts are to be related to perception, to be no fact at all; and how the world is to be described from nobody's point of view, I cannot imagine. When I try to state facts in this fashion I find myself in difficulty. The chair, for example, is the favorite philosophical illustration of a very solid fact. Yet when I attempt to describe the chair, I am confronted at once by "arms," "legs," "seat," and "back"—terms that express a human prejudice; and when I try to dehumanize my description, I seem to find no terms that would make the chair recognizable, none that do not seem to transform a familiar human fact into something rather "metaphysical."

And if it be objected that my way of knowing, or of describing, the chair leaves the real chair untouched, then I am compelled to wonder what that particular reality would be in a world that knew nothing of chairs—in a primitive world, for example, where every one squatted. Something real, I do not doubt; yet still something intelligible, intelligible now from the standpoint of primitive life.

If an automobile would cease to be an automobile in a world without carburetors, I cannot see how it could remain an automobile in a world without chauffeurs. When I try to conceive what that reality would be which is wholly unaltered by being known—to distinguish what the chair is in itself from what it becomes when known to be a chair, the cold fact from the humanly familiar and effective fact—I seem to find nothing but that metaphysical, atomic chair—the chair as varnished by the scientific point of view—which is not "really" a chair and is only doubtfully known.

It seems then that to be a realist, either in philosophy or in literature, is not so simple as it seems. We live in a world which we have surely not originated, a real and not a merely imaginary world; and on the other hand we live in a world which, just in being real, is more or less familiar and (strangely) more or less responsive to our efforts, and which, in its familiarity and responsiveness, reflects at every point our human point of view. A realism that ignores either of these considerations is not a presentation of the world as it is or of life as it is, but an expression of one variety among others of metaphysical theory.

IX

A NEW ESSAY ON THE PSYCHOLOGY OF ADVERTISING

Some years ago, in an article in the *Atlantic*, Mr. Henry Holt stated that, beyond the necessary announcements, and with the possible but doubtful exception of popular novels, little was to be gained from the advertising of books; and for the very simple reason that buyers of books usually know what they want. In the literature of advertising this is the only statement I have seen that touches the point. It also serves to define the "psychology" of advertising. In the discussion of this subject, announcements and catalogues, designed merely for serviceable information, may be disregarded. For "psychology" is wasted upon those who know what they want; it begins with the departure of intelligence. And "the psychology of advertising" is the science of working the public.

This view of the case not only confirmed a certain profound psychological principle which this essay attempts to elucidate, but it satisfies certain private prejudices. I will confess that I look upon advertising in general as only a milder form of confidence game. The clothing dealer who writes me fortnightly a familiar letter and, because I have made one or two purchases from him, assumes the privileges of an old acquaintance, seems to me not to differ essentially from the stranger who pretends to have known my father in order to sell me a gold brick. The man who offers to teach me to write advertisements in ten lessons strikes me as only a newer sort of Fagin. Bill-boards and electric signs, especially the intermittent kind, I regard as an impudent infringement of private rights. And I can credit the statement made to me once by a man in Chicago, who had recently suffered from nervous prostration, that, because of the activity of the advertisers, he was unable to go down town. Upon myself the effect is not precisely in the direction of neurasthenia. When I see a man pointing his finger at me from the middle of a sign-board, with perhaps an impertinent question to boot, I feel that if only he would stand there *in propria persona* I would barter my soul for the privilege of giving him a shot from a Colt .44.

Yet I doubt whether the sense of personal affront is quite so exasperating as the consciousness of living in a world characterized by so much stupidity, vulgarity, and triumphant mendacity. And I wonder too whether the stupid, the vulgar, and the mendacious are three classes or one. However this may be, we know that the advertising world is quite justified in the assertion that "advertising works." No fact of science rests upon a more carefully guarded induction. What is more, it seems that we are perfectly aware of the methods by which we are worked. Any man on the street can tell you with a fair sort of accuracy just how it is done—that is, how he is "done"; but still he is done. Nor may I claim for you, the critical and intelligent reader, or for myself, that we are exempt. Certainly not for myself. With shame I record my defeat some years ago at the hands of an advertising agent to whom I was explaining the attractive theory that advertising is effective only with the unintelligent. "Now speak the truth," he said. "If your wife were to send you to the grocery for a package of baking powder what would you buy?" Speaking the truth promptly, but unwillingly, I answered, "Royal Baking Powder." What did I know about Royal Baking Powder? Well, I remembered vaguely an advertisement in a magazine in which the several grades of "purity" among baking powders (to me an unmeaning conception) were represented by black lines of varying length; and the "Royal" boasted of the longest line.

Here in a nut-shell is the psychology of advertising. For I need hardly point out that, while the propounder of the theory was worsted, the theory itself remained unharmed. Assuming then that we are speaking of the psychology, not of the advertiser, but (if you will permit) of the advertisee, and in particular of persuasive advertising, I may now formulate the psychology of advertising by saying that there is no psychology of advertising. Advertising produces the guaranteed result just so far, and only so far, as psychology is absent. We may wonder that men should be so easily manipulated by methods of whose nature they seem to be thoroughly conscious. The explanation is that they are not conscious. In all of our psychologizing we have to remember that our cognizance of our situation varies indefinitely. I may be generally acquainted with the methods of advertisers; generally aware that they produce their results upon me; but this is far from giving an alert attention to the methods at the moments when they are doing their work. When once I do this the work ceases. This is the whole psychology of advertising.

I

This view of the matter I am now about to demonstrate by the first of two lessons in psychology, for which I crave the reader's patience. Everybody knows in a general way what is meant by "an association of ideas." Few persons, not excepting the professional psychologists, seem to realize that the phrase contains a contradiction in terms; but I need not press this point at the start. All persons familiar with the history of English thought have heard of "the law of association" and the associational school of philosophers. Well, this law of association is the law of advertising psychology. The psychology of advertising is association in the flesh, association reduced to a workshop basis and made to produce tangible results. This fact explains why advertising is a favorite topic among psychologists.

But though every one knows in a general way what is meant by an association of ideas, few, again not excepting the professional psychologists, seem to have taken the trouble to study its exact meaning. For our purpose, however, the exact meaning is all-important. If I ask you the number of Brown's telephone, and you reply "456," that is an association of ideas. If I ask you to give me the square root of 65536, and you reply "256," that is probably (i. e., assuming that this is the first time that you have put the two numbers together) a case, not of association, but of reasoning. This difference is essential to an understanding of what is meant by association, or (if we must speak loosely) by the association of ideas. In a case of association two ideas come together—that is to say, when one is given the other follows—only because they have been together in the experience of the person in question at some time in the past. In a case of reasoning it is unnecessary that the ideas have ever been together; neither you nor any one else need have calculated the square root of 65536. On the other hand no human calculation could tell you that Brown's telephone number would be 456. That "Brown" suggests to you "456," coupled with the fact that Brown's number is really 456, is fairly good proof that those ideas have been given to you together, in the telephone directory or elsewhere, at some time in the past.

Thus an association of ideas is a case where one idea brings up another in spite of the fact that it has no reason for doing so, in spite of the fact that, so far as you are concerned, the two ideas are logically unrelated. And this gives us "the law of association." Accurately and elegantly formulated, that law would read, "Things that happen together tend to stick together." Let "The George W. Childs Cigar" and "generously good" appear together in your experience: they will tend to stick together, in spite of the absence of logic, nay, in spite of subsequent experience with the cigar. Hence an association of ideas may be described as a chance connection of ideas, a connection resting solely upon the fortuities of experience, as against any connection dictated by considerations of fitness, logical, æsthetic, or ethical—which would require another name. It may be indeed that there are no chance connections. Who knows but that Brown's telephone number has been determined for him by the logic necessarily implied in the infinite wisdom of Providence? Let it be so. What that logic may be, is far beyond you or me. In any case it is not you who have connected "Brown" and "456." So far as you or I am concerned, "Brown" and "456" have been connected from the outside, along with "The George W. Childs Cigar" and "generously good."

And this again is what the associational philosophers mean when they teach that all expressions of the human mind, all matters of taste, of morals, and of religion, are but matters of association. Their point is that in the last analysis all human thought is merely the passive reflection of environment and custom; and logic is an illusion. Common sense indeed makes a broad distinction between the effects of custom and necessary truth; what constitutes a proper bathing suit may be a matter of custom, but falsehood and treachery are eternally wrong, while two and two are necessarily four. The associationist assures us, however, that all of these views are alike matters of custom. Who can say that upon the planet Mars two and two are not five? In mathematics as in morals, in morals as in matters of taste, what we call true is what we are accustomed to. Such is the philosophy of associationism. The advertiser, adopting this philosophy, undertakes to accustom the public to what profits himself.

This is of course all far from saying that association stands for nothing solid. The question is whether it stands for any *psychological.* Accordingly if it is not logic that makes the two ideas stick together what does make them stick? For it must be evident that the fact that Brown and his telephone number come together in your experience will not of itself explain why they remain together. Nor, if you are disposed to suggest that logic and fitness are after all operative, will this coming together furnish a *reason.* In the eye of reason the juxtaposition of "The Henry George Cigar" and "I am for men" furnishes no convincing proof of the manliness of those who smoke the "Henry George Cigar," or of its unsuitability for women. Nor again, to anticipate somewhat, does reason take note of the frequency of repetition. The statement that A is B is not truer because it is uttered twice.

What then does make the ideas stick together? The associationist, finding for merely coexisting ideas no cohering medium in the mind, looks for it in the brain. Whether he really finds it there we need not pretend to say. It is sufficient to note that the brain, a vast net-work of cells and fibres, looks much like a connecting apparatus, and suggests quite readily the analogy of a telephone-exchange. Nor need we pretend to understand how connections can be *created* by the fact of coexistence. I know of no telephone-switchboard in which a copper connection between Darby and Joan has been built up by the frequency with which Darby calls Joan. It seems easier here, with James, to explain the formation of habit—for association is but a psychical version of habit—by some vague mechanical analogy. We know that after water has formed a certain track in flowing down hill, the next rain is apt to follow the same track and to deepen it.

When our old coats return from the tailor pressed smooth as new, after a half hour's wearing they resume all their accustomed creases. In some such way the associationist explains the linking of Brown and 456. Each of these represents an activity located somewhere within a given brain. When these two activities occur at the same moment, somehow a connection, an organic connection, consisting, we must assume, of nerve fibres, is formed between them. This connection is made stronger by each simultaneous recurrence of the activities; until at last the two ideas (we are still speaking with the vulgar) are so firmly tied together that when one enters the mind it must perforce bring the other with it.

Thus the two ideas are made to cohere automatically by the action of the brain. The mind has nothing to do with it. This implication will be found in virtually all the literature of association. Let the advertiser bring the two ideas together in your experience, the brain will "do the rest." It is unnecessary that you *perceive that* the Childs cigar and generous goodness are simultaneously before you; it is even unnecessary that you be *aware* of either of them; let them but *be* there at the same moment before your eyes, and the brain will take care of the connection. Using the language of our present subject, we may put the whole matter simply and elegantly by saying that *association works while you sleep*.

We are now, I hope, fairly in possession of the advertiser's apparatus and point of view; his problem is to use the mechanism of association for the purpose of creating a demand, as he would put it—a habit, as we may put it—favorable to his goods. Now it is in his way of going about it that we find the most interesting illustrations of the parallelism between advertising methods and the psychology of association. Association deepens the path, or strengthens the neural connection, between, say, Brown and 456. Psychologists are somewhat divided regarding the "factors" that play a part here, but all are agreed that the most striking factor is *frequency:* other things equal, that connection is stronger which has been most often stimulated. Such indeed is the force of frequency that even the most critical are liable to mistake custom for eternal truth; and we do not know, for example, whether a woman in man's clothes is unchaste or only unusual.

The advertiser fully appreciates the power of frequency. Therefore, as the newspaper publisher never forgets to tell him, it is not enough to insert his advertisement once or two or three times, even though the circulation be confined to a regular set of subscribers; indeed the ideal plan is to engage space by the year. And for the purpose of establishing an all-important uniformity among his repetitions, he is ready to pay a high price for a convenient catch-phrase, the sillier the better. And therefore, again, it is not enough to adorn the fences leading to a country town with a sufficient number of instructions to use his kidney pills to reach every inhabitant; the point is to reach, nay, to strike and pummel, every inhabitant as many times as he can. The advertiser knows that if he repeats a statement with sufficient frequency nothing but a private view of advertising psychology will prevent you from believing it. Therefore he makes it a point to see that you cannot venture abroad, that you cannot ride in a train or a trolley-car, read a newspaper or magazine, consult a directory or a theatre program, without being confronted with his pills or soap, his piano or motor car, his watch that made the dollar odious, or his new division of lots at Bluffton-by-the-Sea. And if he leaves you unassailed in your bed the fault is not his; it means only that advertising methods are still only imperfectly developed.

A second important factor in association is called *vividness*—I should prefer "intensity." It is obvious that a rut in a road may be due to the frequent passage of light vehicles or to the single passage of a heavy vehicle. Whether in this figure we are talking either psychology or physiology, I will not venture to say. But it means that coexistent impressions may be stuck together once and for all if they are put together with enough of a shock. One dose of castor oil in soda water may destroy forever your taste for soda water. In cultivated and anæmic persons the practice of shocking, and in particular the practice of shocking the optic nerve by intermittent lights, is apt to create temptations towards arson and murder. But for the *profanum vulgus* it furnishes a pleasing fascination, and like the large expanses of red and yellow paint, the full-pages of the newspaper which simply announce for whom the place is reserved, the many-storied life-insurance building, mostly rented out, and the fifty-million-dollar railway station, it serves to make a "big impression," which may be counted upon to fix the connection of ideas once and for all.

The third recognized factor of association, *recency,* is not especially instructive. I need hardly explain why one does not advertise snow-shoes in June, and bathing-suits in January. And the more disputed factors of association are too instructive for the scope of this article. I shall therefore close the first lesson in psychology by pointing out once more that in the effect produced by advertising, any relevance between the terms brought together, or even any sense of their being together, has nothing to do with the case. Let the terms but be together, they will tend to cohere. Hence it is not a question of what the advertiser says, or seems to say, but of what he puts into the advertisement. And the unobtrusive things, the purpose of which is not evident to the average advertisee, are usually the most effective. Thus the vision of wearers of fifteen dollar suits lounging gracefully by the side of expensive motor-cars and conversing with fashionably dressed women, all endowed with an aristocratic curl of the lip, creates a pleasing illusion in the mind of the prospective purchasers to the effect that a fifteen-dollar suit is a card of admission to high society. And do we not learn from the cover-pages of the magazines that both Pears' Soap and Ivory Soap express the taste of those who can afford expensive bath-room fixtures? I shall never forget my surprise at learning that Winterbourne Flour (let us call it) was not an especially good sort of flour; for the advertisements might well have been written by Matthew Arnold.

So much for the first lesson in psychology. The topic of the lesson is association; and the thesis is that association works while you sleep. In other words, the psychology of advertising (so called) is nothing more nor less than the (likewise so called) psychology of association; and in the process of association it is the brain that does the work, and not the mind. This first lesson in psychology I conceive to be reasonably orthodox; for, as I have noted, the whole literature of psychology testifies to a preference for the nervous system as a medium, or mechanism, for explaining the formation of associations of ideas.

II

For this second and somewhat briefer lesson I can claim no warrant of orthodoxy. Indeed I do not know of any work of psychology in which the thesis of this lesson is seriously considered, although in my opinion it embodies virtually the whole of what should be called psychology. That thesis is: *association will not work while you are awake.*

I will illustrate, and at the same time demonstrate, this thesis by recalling the advice to young clergymen attributed (wrongly, I hope) to Cardinal Newman: "Preach the Trinity, and you will believe in the Trinity." Here we have a short and easy formula for producing a definite result. Yet it must be evident to the least critical understanding that whether the result follows from the directions given by the formula, will depend altogether upon how far the candidate for belief in the Trinity preaches the Trinity self-consciously, and especially upon how far he is conscious of preaching the Trinity for the purpose of inducing a belief. For, assuming that you were giving the advice, suppose that your pupil should nod his head approvingly and say, "Ah! I see. What you wish me to do is to form a clear and logical conception of the Holy Trinity, to grasp precisely the relation of the three persons in one God, to make myself master of all the heretical objections, and then to explain and refute without ceasing." Imagine your dismay! "My dear fellow," I hear you exclaim, "if you set out in that direction, you are lost. Define! Explain! Refute! Why don't you know that the best minds of the Church have given themselves to that task? And have they yet been able to penetrate the mystery of 'the Father Incomprehensible, the Son Incomprehensible, the Holy Ghost Incomprehensible; yet not three Incomprehensibles, but one Incomprehensible'?

And do you not know that, in the history of the Trinitarian doctrine, the ages of discussion have been the ages of individual opinion and heresy? Nonsense! What you have to do is to accept the authorized formulations and then—not understand them—but assert! assert them! in season and out. And above all don't argue, and don't reason. If you stick to the policy of assertion—repeated and unceasing assertion—you know where you will come out; but if you begin to reason, God himself cannot tell."

I am sure that no Trinitarian will question the worldly common sense of this advice, whether or not he believes that perfectly clear arguments for the doctrine are somewhere producible. Every commercial traveller knows that if he is to believe in the brand of piano or motor car that he has just taken up, he must "talk it up" unceasingly—and not stop to analyze. Analysis may strengthen the case, but it is just as likely to do the opposite, and it nearly always suggests reservations. To think, as Descartes said, is to ask questions. And every one knows that the lean and hungry Cassiuses who "think too much" make poor boosters. "Train up a child in the way he should go, and when he is old he will not depart from it"—provided that he never discovers that he is being trained. Educational theorists love to weary us with the importance of training the child in good habits, and in the next breath with the importance of training him to think; but none of them seems to know how to combine the two.

Note then the application to advertising; and once more let us reflect upon the George W. Childs cigar. I regret that the illustration is somewhat out of date. Picture to yourself, however, a large sign-board. On the right, in large letters, "The George W. Childs Cigar"; on the left the benevolent countenance of the late Mr. Childs, badly distorted; and at the bottom "generously good." As your trolley-car passes the sign, these three items are, so to speak, thrown at you—nothing more. But on your way down town you are assailed perhaps a dozen times. You step into the cigar shop and, as your eye wanders over the boxes in the show-case (unhappily the illustration compels you to smoke five-cent cigars), it alights upon a box of the "George W. Childs." "Ah! yes" (you vaguely recall something), "generously good. Let me have one."

Now my point is that throughout this familiar process you are barely awake. And to prove my point let me suggest what your reflections would be upon surveying that sign-board when you were really alert: Here (you would say) is a manufacturer who has named his cigars after the Philadelphia philanthropist, George W. Childs. I wonder what can be the logic or fitness of the name. Does he mean that his cigar is the sort that Mr. Childs would have smoked? Then he could hardly have known that Mr. Childs detested tobacco and preferred tea. Or does he expect us to infer that because the cigar is named after Mr. Childs, it must be, like Mr. Childs himself, "generously good"? Surely he must know that such an inference, stated explicitly, would provoke an imbecile to laughter. He is therefore careful not to state it. He paints "generously good" on the same sign with his cigar and with the portrait of Mr. Childs—of course we know that Mr. Childs was generously good—and then he trusts to the power of association to fasten the quality to the cigar.

These are the reflections, let us note, not necessarily of the expert psychologist, nor of a mind dangerously sophisticated, but only of any reasonably intelligent man who happens for the moment to be wide-awake. All that they imply is that the eyes of the mind are open as well as those of the body; that one is not merely receiving "impressions" from the world, but is conscious of the impressions that one is receiving. Let that be true, the advertiser has lost his game.

The same thing will be true at any time after the advertisement has begun its work; when your eyes are fairly opened to the fact that you have been "worked" then the work is undone. For suppose I challenge you to tell me, as an honest and intelligent man, why you smoke this George W. Childs cigar. Disregarding anything that you may have learned from smoking the cigar, what answer could you give me but simply this: For my choice of this cigar there is no reason, but only a cause. The cigar-maker has neatly brought about the coexistence of "George W. Childs," the cigar, and "generously good"; he has complied with all the requirements of frequency, vividness, and recency; and therefore, in accordance with the law of association—? Therefore what? I fear that if I should impose the law of association upon you as a moral obligation, I might hear: "Damn the law of association! As a conscious being I am no more bound to illustrate the law of association than to break my neck on behalf of the law of gravitation." Let association be as powerful as you please, when once you perceive that in smoking the cigar, you are only obeying the law of association you will decide that, from now on, it will have to depend upon the quality of the cigar.

I have now laid before you the profound psychological principle which was promised at the beginning of these articles. Having no very exalted conception of the psychology of advertisers, I am loath to believe that they fully grasp its import. Yet you will find the principle illustrated in their practice, in their maxims, and in stray bits of their advertising philosophy, especially in the accepted notion of what constitutes "good advertising." Several years ago I saw something like this: "Do you think that we could afford this space if we were not the largest purveyors of (I forget what) in the city?" No competent critic would call this "good advertising." If you compel your reader to answer questions he is likely to answer them in his own way; and very likely to answer this one as follows: "How do I know that you can afford this space? Are you not buying it precisely in order to be able to afford it? And if you are already the largest purveyors in the city, why do you need it?" In the methodology of advertising, "if," "but," "yet," "although," "nevertheless," "in spite of," and the like, are strictly out of place. The first great commandment of advertising is to be obvious—never require your reader to think. And the second is like unto it: avoid argument, discussion, comparison, and proof—never tempt your reader to think.

And, whether by design or by a sort of natural selection, it seems that the habitat of the genus advertisement is to be found exclusively in those parts of our life where we are not disposed to think. One may wonder indeed why people ever read advertisements. And the answer is, They don't, when they have anything better to do. Compare the alert business-man who grapples with the problems presented by his morning's mail with the same "tired business-man" who, having exhausted the reading matter of his newspaper or magazine by the middle of the evening, turns wearily to the advertising pages in the hope of extracting a few slight sensations before he yields himself to bed. Try to realize the almost hypnotic effect of a long ride on the train or the trolley. These are the moments, the moments of vacant-mindedness and absent-mindedness, when the advertiser is doing his work. At such moments thought lies limp and prostrate before the law of association.

There is a certain old and feeble "catch" which is sometimes enjoyed by the weak-minded. You address your fellow suddenly with, "Which would you say, 'seven and four *is* twelve' or 'seven and four *are* twelve'?" And when he responds (say) with "seven and four are twelve," unconscious of arithmetic in his absorption in grammar, you tell him that for your part you prefer to say that seven and four are *eleven*. Now of course, no man who knows what he is saying commits himself to "seven and four are twelve." Neither does one, on the basis of the sign-boards, attribute a generous quality to the George W. Childs cigar, or a manly quality to the Henry George cigar, when one is conscious of doing so. The advertiser simply plays the "seven and four are twelve" game on a more elaborate scale, trusting for success to the thronging and bewildering demands of our modern life, and the slender capacity of most of us for alert thinking.

X

MORAL VALUATIONS AND ECONOMIC LAWS

THE question to which I invite attention here is the old question, What have moral valuations to do with economic laws? It is the question which called forth the scorn and contempt of Carlyle and the milder indignation of Ruskin for the classical economics, and which fastened upon economics the epithet of "the dismal science." Today it seems that economics is somewhat less of a dismal science. We no longer hear, for example, that wages tend constantly towards the level of mere subsistence. It may even be admitted that labor shares in the benefits of industrial progress. Yet it seems that economic laws are still independent of moral valuations. Wages are still regulated by the law of supply and demand; and among the determining supplies and demands we may note the supply of labor or of capital, the demand for the product of labor, but we hear little or nothing of personal regard for the laborer, the employer, or the consumer. Again, we still hear that the issues of peace and war are determined by economic forces; against the pressure of economic forces it is assumed that reason and diplomacy will be wholly powerless, and on the other hand that no international bitterness following a war could seriously interfere with the resumption of relations that were commercially profitable. It is evident indeed that economic laws operate in one world and moral valuations in quite another. Both moralists and economists talk about "value," and each has a conception of "good," or "goods." It seems, however, that goods and values in the economic sense are wholly irrelevant to goods or values in the moral sense, and that the community of names is more or less an accident of language.

Yet when we seek for the ultimate basis of value we learn that economic values and moral values have a common basis in human need and desire. The market value of wheat or of rubber and the moral value of justice or of love both rest finally upon the fact that somebody wants them; that is to say, they represent the more or less conscious needs of living persons. If we leave out this fact of conscious and personal need, we seem to have no value, either moral or economic. Doubtless the steam-engine requires coal just as the body requires food; in this sense both requirements stand for objective facts; but neither fact becomes a fact of value until it becomes the conscious requirement of a person. But now it appears that the needs and requirements of persons are more or less a matter of judgment and choice; even the need for food is not wholly impersonal and objective. And it appears also that differences or conflicts in the needs of persons are capable, more or less, of voluntary mutual adjustment.

This places the economic law in a somewhat anomalous position. That the planets are determined in their relations to one another by natural law seems intelligible enough when we remember that the planets are without consciousness and without desire. It seems equally intelligible to suppose that the relations between conscious human beings will be determined by personal agreement. In the economic world, however, we are confronted with personal beings, actuated by conscious desire, whose actions affect one another; yet according to economic theory their relations are determined by laws quite as external and impersonal, quite as irrelevant to personal desire or choice, as the law of gravitation.

This states the question that I have in mind. How comes it that the relations of persons are determined by impersonal law? Why are the goods and values of the economic world so unrelated, as it seems, to moral goodness? And why is the economic man, not only in classical theory, but in actual life, so different from the more familiar human being? For all of these questions I shall propose a single answer, namely, that they are all a matter of the extent to which the relations in question are conscious or unconscious. All of the characteristic differences between the moral world and the economic world may be derived from the familiar distinction between personal acquaintance and business acquaintance, between intimate acquaintance and more distant acquaintance. The economic world is the world of distant acquaintance. Socially speaking, it is the relatively unconscious world, the world in which men are unconscious of their mutual relations; and this relative lack of self-consciousness accounts for the fact—so far as it is a fact—that economic relations are determined by natural law.

As a convenient approach to the subject I shall make use of the fact that, for a century and a half past, what has been perhaps the most prominent school of ethics, namely, the utilitarian school, has been also a school of economists. It strikes me as significant of a close relation between moral and economic values that several of the more conspicuous of the utilitarians, such as Adam Smith, the two Mills, and Henry Sidgwick, were both moralists and economists. According to the utilitarian theory, the morality of an act is determined by calculations of pleasure, or happiness; and when we analyze the logic and point of view of the pleasure-theory, we find, I think, that utilitarianism is essentially an economic theory of morals. Utilitarianism is morality treated as a process of exchange and distribution, in which moral value and moral obligation are determined by the methods of the market place. When the utilitarian tells you that honesty is on the whole the best policy he means that it will bring you larger returns, in terms of pleasure, than dishonesty. When he rejects the principle of "honor for honor's sake," he applies to honor the same method of valuation that the economist applies to a painting or a bushel of wheat; that is to say, for the subjective value of honor as measured by this or that personal point of view he substitutes "value in exchange" as measured by an objective mathematical standard. And thus in the utilitarian ethics "pleasure," or happiness, becomes a kind of moral currency, which plays the same part in moral valuation as the part played by money in the valuations of the market. Indeed I think that we may carry the analogy further. If we ask what special sort of desire is represented more prominently by "pleasure" and by "money," we shall find that the utilitarian and the economic standards of goodness are one and the same; both imply that the chiefly important element of the good is material welfare.

And when the utilitarian formulates his answer to the question, "Who is my neighbor?" again he uses the economic method. In the utilitarian ethics personal obligation is usually a matter of *quid pro quo.* The moral man, like the traditional economic man of the classical economics, is one who buys in the lowest market and sells in the highest; the neighbor to whom he owes the greater obligation is the neighbor from whom he may in turn expect the greater consideration. And it is still an economic point of view that guides the utilitarian when he lays down the formula of "the greatest happiness of the greatest number," in which "everybody is to count for one and nobody for more than one," as a rule for the administration of law and the distribution of public benefits. For in the last analysis the greatest happiness principle is a principle neither of distributive justice nor of humanitarian sympathy. It is simply a convenient rule for the distribution of goods based upon a typically economic estimate of what is conducive to the highest average of welfare or prosperity.

Now at first glance we are likely to condemn the utilitarian theory as an immoral theory of morals. Such is the traditional reply to utilitarianism; and certainly it seems offensive to our moral sense to suggest that calculation of private advantage is to determine our obligations to our fellows. Yet it seems just as certain that something must depend upon my relations to the fellow in question. Among the thousands of human beings with whom one comes into contact in the course of one's life there are few with whom one can establish any very intimate degree of fellowship. Granting that at certain crises any human being may be in some sense my fellow, yet under ordinary conditions there is for each of us a broad distinction between those to whom we are more intimately related as friends and those who stand in the more distant relation of "the public." For any soundly reasoned ethical theory it seems to me that this distinction must have an important significance. And if we consider only the more distant relations I think we must say that, in this field, the utilitarian theory of ethics is approximately valid. Here it seems that moral obligations and economic utilities lead to the same result.

Consider, for example, the moral situation of one whose business in life is to provide the community with shoes. From the economic point of view he is selling shoes, not "for his health," but for pecuniary profit. From this point of view he is the traditional economic man, whose chief purpose in life is to buy in the lowest market and sell in the highest. Now a good deal of idealistic contempt has been lavished upon "the economic man"; who seems indeed to have been less a creation of the economists than of those who cherish an idealistic disgust for the ethics of trade. Yet when we undertake to say what would be, under modern conditions, a more moral rule of trade than the rule of buying in the lowest market and selling in the highest, we find ourselves at once in difficulty. Let us assume—what I should not assume—that the sole justification of the shoe-merchant is the fulfilment of a social function; how shall he fufil his function? Among his thousands of customers, who have the greater need of shoes? Who deserve to be served first? And who deserve the better qualities? From the point of view of the shoe-merchant there appears to be only one way of answering these questions: those who have the greater need are those who, other things equal, will make the greater sacrifices; in other words, those who will pay the higher price. Now it may be that the "other things" are never quite equal. It may even be true that, in terms of personal economy, those who pay the highest price make the least sacrifice. But your shoemaker knows nothing about this. Under strictly commercial conditions all that he knows, or can know, about any of his customers is the price that he will pay. Under these limitations of knowledge it seems that the economic rule of preference for the highest bidder is also the best available rule for distributing goods according to individual needs.

The situation is different when we come to the personal and private relations; and it is the application of the utilitarian rule to these relations that makes it seem morally offensive. There is nothing especially repellent in the idea that economic pressure should determine the relations of men in business; for here it seems that pressure and resistance are as a rule a fair measure of moral desert. It seems distinctly immoral, however, that pressure should determine the obligations of man and wife or of parent and child. Again, it is more or less necessary that, in a business transaction, the buyer should take care of himself; in "a friendly transaction between gentlemen" we may expect that each may consider the point of view of the other as well as his own. This does not mean, however, that the personal relation is superior to considerations of *quid pro quo;* it does not mean, for example, that the idea of the family is repugnant to the distinction of individual obligations and individual rights. Rather may we say that all relations between individuals, however intimate, are in some sense relations of exchange. The difference lies in the fact that in the personal relation the things expected of one another are not easily reducible to quantitative calculation; and on the other hand calculation is neither a relevant nor an efficient method of adjusting the personal relation.

In the world at large, the world of distant acquaintance, each individual is, from the standpoint of each other, a unit, an impersonal "one"; or if any differences are recognized, they are the differences expressed in a single quantitative standard, such as the price that one will pay. Generally speaking, therefore, two individuals will count for twice one, and in a case of conflict the interests of the one will be sacrificed to the presumably greater interests of the two. In making arrangements affecting a multitude of individuals the rule will be that of "the greatest happiness of the greatest number" in which "everybody counts for one and nobody for more than one." The passenger-schedule of a railway or the bill of fare of a restaurant is made to accommodate the majority, as determined, not by personal consultation, but by statistical calculation, and the minority may suffer inconvenience or go without.

All of these conventions, however, are necessities of distant acquaintance. In the more intimate circle each individual is not a unit, but a person; not an abstract quantity, but a concrete and peculiar quality. You cannot say here that two count for more than one; on the contrary, each is an invaluable one, and the sacrifice of one to another is to be regarded only as a necessity of the last resort. In the family relation it seems rather grotesque to talk about "the greatest happiness of the greatest number"; and I fancy that any one of us coming to his family table and finding there nothing that he could eat, would find rather cold comfort in the thought that a calculation of the greatest happiness had shown that his tastes could profitably be ignored. The introduction of the greatest-happiness rule, or of any fixed rule, into the affairs of the family seems to imply that the family has been transformed into a sort of committee and that frank confidence has given place to formal reserve. Where the *restaurateur* can expect only to please the majority, the housewife faces the nicer problem of pleasing all.

Meanwhile she is not restricted to calculation. Calculation whether in science or in common life, presupposes that we are dealing with the remote rather than the immediate. We measure the man for his coat when the coat is not at hand to try on; when we can fit the coat to the man the size of the coat becomes a matter of idle curiosity. Similarly, in adjusting our social relations we calculate only when we are denied the opportunity for personal consultation. Under these limitations calculation is doubtless an efficient method of adjustment; but it is a wasteful method, a method involving much sacrifice to all of those concerned, when compared with the possibilities of personal consultation. Under conditions of intimacy and confidence, with indefinite possibilities of question and answer, of suggestion and counter-suggestion, we may expect that sacrifice will be reduced to the minimum. The fact of intimate communication makes a difference, not only in the obligations between persons, but in the character of the practical result.

In this distinction of more intimate relations we have, it seems to me, the root of all the differences between the moral world and the economic world. A moral obligation between man and man is constituted, I should say, by the fact that they know one another. If in driving along a public road I know that the driver of an approaching vehicle will turn to the right and that he expects me to do the same, this knowledge is sufficient to constitute a moral obligation; if there is no agreement upon that point, and no possibility of agreement, then for each it becomes a question of who can more safely risk a collision. Consequently, moral obligations are of all degrees of comprehensiveness. We may talk of our duty to all mankind but we all seem to recognize a greater extent of obligation towards our friends than towards more distant acquaintances, and a greater obligation to an acquaintance than to a total stranger. Even the good Samaritan must have felt a more compelling obligation had the man who fell among thieves been a fellow-Samaritan. But if we ask what makes one obligation more compelling than another, I think we are bound to come to this: that the extent of obligation is a question of the extent of personal understanding; in other words, it is a question of the number of points of contact. With the stranger whom I pass on the road I have, so to speak, but one point of contact. With my intimate friends I have not only many points of contact, but each is related to all the others in what the lawyers call a "meeting of minds," or of personal points of view.

Now the economic relation, in spite of all its complexities, is very similar to the relation of two men who merely meet on the road. It is a relation in which men are strangers to one another at every point but one: what each knows of the other is simply what he will give in terms of money or what he will take in terms of a specified commodity. In a word, it is a relation of mutual ignorance rather than of mutual knowledge. To make my meaning clear I will ask the reader to picture to himself a typically economic situation such as that presented by a great commercial city like New York. During a few hours of the day he will find some hundreds of thousands gathered in the downtown district and engaged in the business of exchange; during the night they are scattered in their homes up-town or outside of the city, in New York, New Jersey, or Connecticut. If you ask what they are exchanging, your first answer may be, useful commodities for personal consumption. But in every act of exchange the commodities offered on one side are simply dollars and those on the other side are offered only in exchange for dollars. And the nearer we come to a completely organized market, such as we find on the Stock Exchange, or the grain or cotton exchange, the less interest we seem to find in useful commodities, grain, cotton, or railways, as such, and the more it seems to be a matter of exchanging certificates or receipts, for anything you please, provided only they are readily convertible into dollars. What we find then is a vast concourse of supplies and demands, all expressed in terms of a single abstract, quantitative standard. And in the business district this is, generally speaking, all any man knows of his neighbor, namely, what he will give or what he will take.

If, therefore, we take a bird's eye view of the business district and consider the business district alone, what we find is a city by itself composed exclusively of "economic men," in whom all the infinitely various needs, bodily and spiritual, embodied in what we call human nature, have been replaced by the single need of buying in the lowest market and selling in the highest. It will not do to say that the "economic man" is a merely grotesque abstraction. Modern economic conditions, by taking the business out of the home, have incorporated him, with all his grotesqueness, into the world of fact. When a man leaves his home for his office he enters a different world, and to meet the conditions of that world he becomes for the time being a different man. Though generous and humane in his private life, in business he is bound to be more or less hard and unforgiving. A man of many tastes at home, in his business he must devote himself to the cultivation of one taste. Doubtless we may find many evidences of humanity in the commercial world, but humanity is at best only a by-product of commerce. The purpose of men in the market is not to cultivate friendship, but to make money.

Yet the economist will tell us that no one is really aiming at money for the sake of money itself. Money is but the representative of the more comprehensive conception of "wealth"; and wealth—well, wealth is what money will buy. Looking at the things that are exchanged for money we are very likely to think that wealth consists of commodities that are distinctly tangible. But if we analyze the desires represented by wealth we shall see that wealth is as various as there are men who desire it. To one man wealth means a luxurious home; to another social position; to a third the education of his children; while a fourth man thinks that his money is well spent if it brings him nothing but freedom and leisure. And therefore, if we seek the real forces determining the economic situation—the "ultimate economic forces"—we shall find ourselves leaving the business district and studying our business men in their distant homes.

For, in the last analysis, it seems that, under the disguise of economic men, the market is really a concourse of persons. And the competing supplies and demands, though defined in abstractly quantitative terms, are really as many and as concretely personal as there are individuals engaged in the market. But this only points once more to my thesis, namely, that the economic relation is a relatively unconscious relation. For under strict market conditions these personal reasons never come to speaking terms. Intercourse is confined to "What will you give?" and "What will you take?" and the reason why is left unspoken. Under these conditions the relations of men in the market are like those of men walking in the dark, where each, deprived of the fuller and more immediate knowledge of vision, is compelled to depend, in adjusting his movements to those of his neighbor, upon a more or less imperfect inference from what he can hear. And I think we are bound to assume that, if the personal reasons could be brought into consideration, the resultant situation would be greatly altered.

Now at first glance this view of the economic situation may seem monstrously false. For it seems that, in modern society, in times of peace at least, the economic world represents the point of most complete organization. The economic process may be regarded as the social process reduced to a scientific basis by organized observation and statistical calculation. Indeed it may be said that a comprehensive representation of all the possible bids and offers is a necessary condition for an organized market and for a stable and objective market-price. All of this may be true, yet without prejudice to what has been said. It only raises the broader question regarding the status of scientific knowledge. For I shall admit that the knowledge which men have of their neighbors on the market is a typical case of scientific knowledge; and indeed an instructive case. Scientific knowledge, however, is knowledge by simplification; in other words, it stands for relative ignorance. Scientific method is irrelevant to the familiar and concrete; as a rule we reserve it for the more remote and inscrutable. And there it controls its object by substituting for the object a simpler and more intelligible model. For the concrete properties of a substance the chemist substitutes an atomic structure, for the varieties of color the physicist substitutes rates of vibration of the ether; of the relations between color qualities as such the physicist can tell you nothing. In like fashion a scientific market substitutes for concretely personal needs demands and supplies expressed in terms of dollars and cents. And if you reply that for practical purposes it makes no difference whether you deal with the substitutes or with the originals, then I shall say that, though this be true of colors, it is not true of persons. The relative stability of market prices is due to the fact that the personal equations are kept out of the market. The equilibrium of supply and demand presupposes that bids are stated as facts and not as preliminaries to negotiation. Where personal communication is established prices have ceased to be objective.

To illustrate my point I will invite the reader to consider the assumption that is fundamental to the scientific market and the objective price; and to show that this assumption is not peculiar to an ultra-scientific view I will refer him to a decidedly humanistic treatise on economics, namely, the *Economic Principles* of my colleague, Professor Frank A. Fetter. In Vol. I, Chapter 7, on "Principles of Price," it is assumed that the market is made up of buyers and sellers each of whom is ready to buy or sell a given maximum or minimum quantity of the assumed commodity at a given price, determined by him before entering the market. In the illustrative scheme the prices both of buyers and of sellers are assumed to range from 1 to 14, and the resultant price, representing the final equilibrium of supplies and demands, is 9. Now this assumption, obviously implied in the conception of objective price, is never quite true of any actual market or of any living buyer or seller. Even in organized commerce, where it is most nearly true, no buyer or seller cares to commit himself finally until he sees how the market is going. The purchaser in private life rarely has his price set; but if, having decided to pay only $5 for a pair of shoes, I find none that suit me at that price, it does not follow either that I shall withdraw from the market or that I shall submit to the $5 shoes; the more probable result will be to reopen the question (involving perhaps my whole personal budget) of what I can afford.

Still less ought we to talk about a ready-made price, fixed in advance, in a case of barter, or where the conditions permit of "higgling." One need only recall the familiar dialogue in which "What will you give?" is answered by "Well, what will you take?" Under conditions of free communication no man who expects to act intelligently can say finally what he will do, or what he can do, until he has consulted the other party—just because, if for no other reason, the other party is in a similar position. The prices representing the two parties are not constants, but mutually dependent variables; the market-price is reached, not through the composition of initially given forces, but through a repeated interchange of tentative proposals—not by a mechanical process, but by a logical process; and the final outcome is not an "equilibrium" of "forces," but an agreement of minds. The assumption of a ready-made price would be true only for one situation; namely, where the market is composed, not of principals, but of brokers, or agents, executing fixed orders. And my point is that it is the psychological equivalent of this situation that underlies the scientific market and the objective price.

If we are to grasp the true peculiarity of the economic situation we must remember that, while "the economic motive," so called, of bodily sustenance is as old as life itself, and thus not an exclusively human motive, all that apparatus of exchange which constitutes what we call an economic world and supplies the material for a science of economics, is distinctively a feature of *modern* commerce. And at the same time we must remember that the science of economics is distinctively a modern science. I believe that Aristotle is sometimes regarded as the first economist; but all that Aristotle has to tell us about commerce is that commerce is contemptible. Economics as a science is born, not only at the same time, but in the same land, as modern machinery and the modern system of *entrepreneur* industry. In brief, the economic world, as we understand it, is peculiarly the product of commerce on a large scale; it is the special creation of modern machinery and modern apparatus of communication.

Now, strangely enough, one of the results of improved means of communication is to hold apart those who, we should say, would be most concerned to meet. It is true that, in the sense that the products of one land are consumed in distant lands, modern commerce brings more distant persons into some sort of economic relation, and thus creates larger economic wholes; but in doing this modern commerce also separates the ultimate producer and the ultimate consumer, the ultimate borrower and the ultimate lender, and even the ultimate employer and the ultimate laborer, by the interposition of an indefinite number of middle-men. Thus it results from the very magnitude of the situation that the personal needs which constitute the ultimate forces of the market are kept largely in ignorance of one another. Each person entering the market becomes blankly a term in a scientific system of exchange, and each is confronted, not by other persons, who as persons may be open to negotiation, but by the blank facts of the system.

I feel it necessary to emphasize this large-scale feature of the economic process because, in textbooks of economics, we may note a tendency to explain the economic world by reference to a miniature world of primitive barter in which commodities are exchanged, not for money, but for commodities. Now the process of barter implies a kind of psychological situation quite remote from that of the world of economic law. When men meet face to face for barter a rejected bid invites an alternative offer. If I cannot get your horse for my cows, perhaps I can get it for something else; or if you will not let me have the horse, it is possible that, if I explain why I need the horse, you will find it worth while to further my ends in some other way. Through this introduction of alternatives the opportunity is opened on both sides for personal choice; and in the presence of personal choice the blind forces of supply and demand are modified in the direction of personal agreement. This means again that the conditions are created for a transaction more profitable from the point of view of both parties than any simple market transaction; each of the parties may not only save money but satisfy more completely his personal need. Nay, it is even possible, if the process of negotiation be carried far enough, that each may get all that he originally demanded, all that for which he would have paid a price upon the market, without any sacrifice whatever; and that what began as a blank opposition of supply and demand may end in a perfect harmony of interests. In brief, the relation of men in barter, is, relatively speaking, a moral relation rather than an economic relation.

Compare this transaction with the typical transaction on the market. Under market conditions, each party to an exchange is confronted with a hard fact, in the form of a money-price, which he may either accept or reject. Under the conditions of the market it is useless to propose an alternative basis of exchange. And in the fully developed market it is superfluous to suggest even a lower or a higher price. For each one knows that the price offered or demanded is determined, not by the will of the other, but by the sum-total of demands and supplies constituting the market. Thus each is confronted by a body of opaque fact, for which no one is personally responsible, and which cannot be attributed to any social agreement. And between any two parties to the market this body of fact stands like an ocean or a range of mountains, forbidding communication except under definitely limited conditions. Each, in a word, faces precisely the same situation as when he is confronted by the impersonal facts and laws of nature.

Such is the meaning of economic law. If we think of the economic process in terms of social process, then we shall say that the element of law, as constraining our will, is the correlate of our unconsciousness of the process. As a matter of law, the economic process is a feature, not of the world of social consciousness, but of the larger world of social unconsciousness. And if it be objected that economic laws stand for positive forces, then I shall reply that all "forces" as such—as distinct from motives or persons—are unconscious entities; and further that it is precisely this unconsciousness that distinguishes all of the impersonal and inevitable "laws of nature." It is important to remember that the meaning of every term is determined by reference to an opposite. Now the opposite of natural law is personal choice or agreement; when we say that action is determined by law we mean at the same time that it is *not* determined by choice. And this is what we mean when we cite, as the most striking and distinctive expression of natural law, the course of the planets around the sun; we mean that of all the bodies, conscious or unconscious, within our experience, the planets are the typically unconscious. If, by an effort of imagination, we could conceive the planets to be aware of their movements and of their relations to one another, we could no longer conceive them to move according to impersonal natural law. Now in the social and economic world we have a group of bodies whose movements are partly conscious and partly unconscious. So far as they move consciously they are moral agents; so far as they move unconsciously they are physical facts, like any other physical facts; and it is the bare physical fact that lies at the basis of economic law.

Thus if we ask whose taste and judgment are expressed in most of the things that we use and wear, our reply must be that to a large extent they express nobody's taste and nobody's judgment. An economist might tell us that the selection of what is to be bought and sold upon the market is determined by economic law. But this means only that the maker and the user are more or less out of communication; and in the absence of communication the selection is determined by physical fact. When I buy a pair of shoes, for example, I take, not what I want, but the best that I can get in view of a given supply; under modern conditions it seems futile to specify what I should prefer. But the supply of shoes is determined, on the side of the maker, by a statistical record of what I and the other purchasers actually take. Each of the two parties deals then with a bare physical fact—the fact that certain goods are taken, or that certain goods are found in the supply. The economic process of selection, so called, is hardly more of a mental process than the processes of an adding-machine or a cash-register. Again, the Minnesota farmer, rejoicing in an unusually large crop of wheat, is disgusted to learn that prices are low; perhaps the cause of low prices is to be found in similarly large crops in Russia or Argentina. But doubtless the wheat-growers of Russia and Argentina are similarly disgusted. Each party to the market finds his ambitions thwarted by economic law. But in the last analysis the opposing force is a physical fact, the fact, namely, of a large supply of wheat in the market; on the other hand it is not difficult to see that this physical fact is due largely to the lack of communication between wheat-growing centers.

And thus, in the final analysis, it appears that economic law is a case of unconscious physical causation; economic laws are statements, not of what men plan to do, nor even of what they desire to do, but of what actually happens as the result of their actions. Now it is clear enough that in reaching this result we have ceased to describe any actual economic situation. But this only serves to establish my main conclusion, namely, that no actual economic situation, no situation which implies the participation of living human beings, can be dominated exclusively by economic law. Economic laws and moral obligations form the limiting terms in a graduated series between which lie all the relations of men in concrete life. No human being is quite so unconscious of the effects produced by his actions, or of the source of the effects produced upon himself by the action of others, as the members of the planetary system; on the other hand no two human beings ever reach the stage of absolute mutual understanding. Every human action, and every social relation, is partly conscious and partly unconscious; and thus every social relation is determined partly by choice and agreement and partly by blind cause and effect. But in the march of life we become conscious of relations that were formerly unconscious. And in the measure that this is true economic law is transformed in the direction of personal agreement.

Nothing illustrates this better than the *consciousness* of competition. When we rely upon the competition of producers to keep prices down we are assuming that it will be blind competition. If we suppose the several competitors to become clearly conscious of one another we are bound to suppose that they will combine for mutual advantage. Prices will then continue to be fixed by supply and demand, but instead of saying that human actions are determined by supply and demand, we must now begin to say that supply and demand are determined by the will of men. And, though the mutual understanding of producers has left the consumers out of the question, it will still be true that, within the circle of producers, the consciousness of one another has instituted a moral obligation.

Accordingly, in any actual economic process the economic relation is being constantly transformed in the direction of moral obligation by the simple fact of consciousness of the relation. At the same time the consciousness of the relation becomes an important factor in determining the economic situation. Yet among the factors recorded as determining an economic relation it seems that consciousness of the relation is commonly the last factor noticed. To illustrate the consequences of this omission, let us consider for a moment the important problem of rates of freight. Among economists it has been generally assumed in the past that rates of freight should be determined by the principle of "what the traffic will bear"; in other words, the price of transportation should be determined, not by the cost of transportation, but by its utility to the purchaser. Now we may freely admit that from the point of view of the railway this is a legitimate principle—indeed the only available principle—as long as "the traffic" consists of a vaguely inarticulate and uncomprehending "public" which is known to the railway official only as a statistical body of fact. And that an unconscious traffic is presupposed in this principle, is revealed by the fact that one of the reasons for laying a high rate upon goods that are relatively light and relatively costly is the assumption that it will not be felt.

Such was the situation in the United States, say, thirty or more years ago. Meanwhile the traffic has become conscious of what it is bearing, and through the several railway commissions it has begun to give articulate expression to what it is willing to bear. It seems rather naïve to ask a fully awakened traffic to admire the principle of what the traffic can bear. From the point of view of a united traffic the more interesting question is, What can the railways bear? This means that a new element has been introduced into the determination of price, namely, the rejected factor of cost. To the buyer of transportation cost stands in the same relation as utility to the seller; that is to say, it marks the lower limits of price beyond which no agreement will be possible. And when you are confronted with a buyer who insists upon reckoning the cost, and whose insistence is supported by the logic of his position, it is vain to urge that in economic theory prices are never determined by cost of production. In any face to face adjustment, or in any judicial adjustment, both cost and utility are bound to be considered and each will have a voice in the resulting adjustment.

But any face to face adjustment is bound also to move in the direction of a moral adjustment. A negotiation conducted on a purely economic basis implies a situation like a game of cards, where each player conceals his hand; the seller remaining silent with regard to cost, the buyer with regard to utility.[1] But when the game is played face to face we reach sooner or later a point where concealment of the cards is no longer worth while. Supply and demand have reached a deadlock; the economic forces have been fully measured in terms of one another; the question is now what use you will make of them and what consideration you expect. At this point the economic problem becomes distinctly a moral problem. Considerations of what the traffic will bear as against the cost of transportation are more or less superseded by the introduction of the conception of a "fair" rate, of a "fair" return upon investment, or "fair" conditions for getting the return. In the freight-rate controversy this point appears to have been reached. In the message to the public which now very commonly occupies the cover-page of the time-table we seem to find nothing about what the traffic will bear, much about the increased cost of operation, much about the service rendered to the public, and in general an appeal not to economic force, but to justice and fair play. The appeal to justice doubtless complicates the question—the calculation of economic forces is always simpler; nor can justice be defined apart from the disposition of economic

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[1] This figure of the game is often applied to the economic situation. In a hasty view it lends itself readily to the idea that the game is determined by the dealing of the cards, and that perfectly intelligent players would decide the outcome simply by displaying their hands. Let it be noted, however, that such perfect intelligence—which is possible, if ever, only for a strictly limited field of conditions, like a game of cards—implies a perfect mutual understanding of personal points of view. In the actual game the play of a given player is determined, not by the card that his opponent plays (since this is uncertain until the play has been made), but by the card that he expects him to play. In the economic world bids and offers are determined, not by the *facts* of supply and demand,

but by the *forecasts* of supply and demand; and forecasts imply a certain comprehension of the disposition and point of view of the other party. Thus every economic process, so far as it implies a relation between human beings, implies some degree of moral calculation.

forces. It means, however, that a sense of mutual obligation and mutual advantage is supplanting the merely blind operation of economic law.

This leads me to a concluding observation. Paradoxical as it may seem, I should say that the chief moralizing and humanizing force in the economic process is the study of economics; and not the least effective, in this respect, is that brand of economics which stands for the absoluteness of economic law. Here indeed we face the paradox common to all of the so-called sciences of human life. The sciences of humanity have a way of leaving out of their calculation the effect of science upon humanity. The classical economics appears to presuppose that nothing will be substantially altered by the science of economics. Now when we discover a law relating to the solar system, the solar system, blissfully unconscious of the law, moves in the same way as before; but when we discover a law of human nature, we are placed by the very fact of discovery in a position to say whether the law is to continue to prevail. In brief, the dominion of law is dissolved by the consciousness of law. The most striking illustration of this is the Malthusian law of population. Speaking broadly, we may say that up to the time of the Malthusian formulation the pressure of population upon subsistence was a universal law.

As soon as the law was formulated, and precisely as the result of being formulated, the law began to lose its force; and now we sometimes face the complaint that population refuses to press upon subsistence. And therefore when we are confronted with an economic determinism which tells us that human life and social conditions are under the absolute dominion of economic law, it will be sufficient to point in reply to the economist who reveals the law, and who by his organized investigation of economic fact enables us more or less to know where we stand with relation to one another. Through his revelation of law and of fact, it is precisely he who plays the leading part in transforming the world of economic determinism into a world of moral obligation.

XI

PSYCHO-ANALYSIS AND SEX-PSYCHOLOGY

I

THE Freudian psychology may be briefly summarized in the formula that no human action is without a meaning. When my typewriter writes "Indiana" instead of "Indian" most psychologists would allow me to plead blind and meaningless habit, induced, say, by several years of residence in Indiana and by the custom of writing that name at the top of my letters. Not so the Freudian. According to him, whether I know it or not, I am *meaning* "Indiana," and he is curious to know why. And when, like half of those in the teaching profession, I find myself unable to recall the name of the former student who greets me warmly on the street, that too has a meaning—namely, that I have a grudge against him. Likewise if I dream of my father's funeral it means that I am, or at some time have been, in a hurry to have his funeral take place. And in like manner the muscular contractions of a patient suffering from hysteria are not merely muscular but significant; they are definitely purposeful attempts to fulfil a wish. Every human action, however trivial or accidental it may seem, is the expression of a meaning, which is also a wish; and where no wish is in evidence it is the expression of an unconscious wish.

The wish is invariably a sexual wish. At any rate it is clear that Freud considers all explanations incomplete until the sexual motive is found. Brill, disciple and translator of Freud, reproaches Freud's American critics for failing to understand that by "sex" he means all that we mean by "love"; and Jung's translator is careful to tell us that Jung has broadened the Freudian conception of "libido" from mere sex into a universal "life-impulse." One need not quarrel with these definitions. It is sufficient to say that, whether Brill talks about love, or Freud about sex, or Jung about the life-impulse, their illustrations of the motive fundamental to all human wishes are of the same order; not merely sexual, but abnormal and obscene. Jung indeed proposes an edifying theory, according to which all of the mechanical arts are but the by-product of sexual abnormality.

But the wishes are not all upon the surface. The Freudian cleaves each of us neatly into two parts, a conscious self and an unconscious self, who play the parts, respectively, of Dr. Jekyl and Mr. Hyde. Each of us carries within his spiritual vitals, so to speak, a demon of vileness and indecency whose presence we (i. e., our more respectable conscious selves) wholly fail to suspect until we are enlightened by psycho-analysis. Of the two it seems that the unconscious self is the more clever and knowing—in the Freudian psychology the conscious self is always a fool. Evidently the demon is actuated, not by lust alone, but by the love of mischief; for it seems that his great delight in life is not merely to obtain sexual gratification (which he seems to enjoy only in the world of imagination), but to obtain it surreptitiously, by imposing upon the innocence of the conscious self. Thus he commits the conscious self to embarrassing lapses of the tongue, betraying an obscene or malevolent preoccupation, and in poetry and in dreams he veils gross and abnormal inclinations under apparently innocent imagery. He gratifies an incestuous longing by dreaming of a stairway.

Conversely, since the discovery of the unconscious self it has been shameful to dream of a stairway. *In vino veritas* is the Freudian motto. Who is the real I? Not the personality expressed in sober and reflective judgment; not the conscious self, but the demon that rules when I am off my guard. According to Freud, the function of the conscious self is merely "sensory"; that is to say, he merely reflects—and wonders at—the wishes of the unconscious self.

Yet, strangely, he also exercises censorship and control over the unconscious self, compelling the latter to gratify his lusts in devious ways. And this control results in a certain repression of desire, a conflict between the conscious and the unconscious selves, which, when intense, manifests itself in hysteria. The Freudian psychology, we must remember, is the psychology of hysteria; and it was in the treatment of hysteria that Freud developed the celebrated method of "psycho-analysis." Psycho-analysis consists in making the patient conscious of his repressed desires, or in bringing the conscious and the unconscious selves together. An important feature of the method is the interpretation of the symbolism of his dreams, according to the cipher elaborated by the Freudians. When his secret desires are thus brought home to him the conflict ceases and he is cured.

How this result, not quite remote from common human experience, is, or ought to be, brought about, the Freudian does not clearly explain. The simple method of gratifying the desire even the Freudian admits to be not always feasible. For such cases he proposes "sublimation"; which means, I take it, that the patient is to fool himself by a poetic, or make-believe, gratification. In general, however, it may be said that the Freudian method of "catharsis" is to ask the censor at least to make it easier for the unconscious self.

Such, in outline, is the Freudian psychology; the psychology of an underworld, weird, grotesque, uncanny, and bestial; recalling, in the hell within us, the cosmology of Dante's *Inferno*. To the Freudian it stands for a triumphant achievement of modern science; to a reader of ecclesiastical history it will be more suggestive of the "allegorism" of Origen and Clement of Alexandria.

II

Doubtless the reader has noted the self-congratulation of the hen after laying an egg. Nothing in the world expresses so perfectly the sense of original achievement. Were the hen a hopeful subject for psycho-analysis, we might expect to convince her that her consciousness of originality is the expression of an unconscious aversion to the achievements of other hens and to commonplace fact.

Similar reflections are suggested in the attempt to apply the process of psycho-analysis to the Freudian psychologists. Judging them from the point of view of ordinary psychology, we might dismiss their eccentricities with the reflection that, as specialists in psychiatry, they may be biased by their special preoccupation, insufficiently in touch with psychological theories, and insufficiently practiced in the observation of normal mental life. Upon the Freudian theory, however, it seems necessary to postulate an unconscious longing for something sensational (connected with what sexual preoccupation, I will not venture to say) which manifests itself in the practice of caricature. Only thus can we explain the novelty attached to their discovery of the wish as father to the thought and of the elements of conflict and repression; a novelty which, to students of James's *Principles of Psychology,* published in complete form ten years before the first edition of Freud's dream-book, and of Dewey and Stout, not to speak of Schopenhauer and Wundt, will be otherwise unintelligible. Thus also must we explain Freud's naïve suggestion that perhaps the conflicts and repressions disclosed by hysteria have an unsuspected application to normal life. As long ago as Aristotle philosophers were wrestling with the question, whether consciousness without disturbance is inherently conceivable; and Aristotle's answer is given in his conception of God.

As for the "censor," to those familiar with the theory of "apperception" of Leibnitz or Kant or, more recently, of Stout, he is an old acquaintance. The whole of the psychology of the "mental-activity" school is based upon the view that, even in ordinary perception, the mind, instead of passively recording impressions or suggestions, is actively engaged in selecting and transforming them, rejecting the false and irrelevant; and by this process alone do we keep our world straight.

The Freudian's contribution consists in converting the suggestions rejected or suppressed, the leavings of the conscious self, into a second fully organized personality, a demoniacal Alter Ego, crafty and mysterious, lustful and malevolent. This sensational result he accomplishes through a caricature of the difference between the conscious and the semi-conscious, or the less conscious, or between the normal and the less normal, and by the choice of the latter as his point of departure. He begins with the analysis of neurosis and, having discovered there the similitude of a demon, he then undertakes to show that ordinary forgetting is a phenomenon of the same abnormal kind; had he begun with the forgetting, he might have shown that the mental disturbances of neurosis are only an extreme form of what is common to normal life.

For it needs no subtle introspection to see that the hard and fast division of the person into a conscious and an unconscious self is a simple exaggeration. What each of us finds in himself is rather one person, conscious in infinite varieties of degree. Every man knows that there are days when he is exceptionally alert, able to concentrate his attention easily upon a given task and to see at a glance all the relevant details, and other days when he seems to be groping for them. There are times within every day when we rejoice in a difficult problem, and other times when it is pleasanter to indulge in revery. The Freudians love to think of our mind-wandering and day-dreaming as an incursion of the demon, with his sexual preoccupations, into otherwise normal life; but, calmly considered, day-dreaming is as normal to mental life as sitting down to physical life. And no theory of demoniacal possession is needed to explain why we are mentally fresher and more vigorous at some times than at others.

Any one who attends carefully to what happens in the less alert moments of our waking life may easily find there, in mitigated form, among the quite normal phenomena, most, if not all, of the phenomena of the abnormal, including hysteria and dreams. The stubborn fool, bound to have his own way without regard to what is dictated by reason, may very properly be included in the class of the hysterical; and this class, broadly considered, includes every one of us in all but the moments of calmest reflection. To illustrate the dream in normal life, I offer the following commonplace personal experience, which I should hardly have noted had I not just been reading Freud's book of dreams. Some years ago I accompanied my mother, at the end of her visit of a few months at my home in a Middle-Western town, some fifty miles on a connecting road for the purpose of seeing her safely on the through train to her home in the east. Returning late in the afternoon, very tired and dull, but far from asleep, I recalled a piece of news that I had lately heard, and the next moment I became aware of saying to myself, "That will interest Mother. I must not forget to tell her at dinner tonight"—forgetting that I had just put her on the train going east. A friend tells me that he remembers, as a boy of ten, when riding home from his mother's funeral, picturing to himself the pleasure he would have in telling his mother about the funeral. Examining these illustrations, which any one can parallel, you find all the conditions required for the dream that one has seen a deceased or absent friend; it is necessary only to forget that the friend is dead, or absent.

In the waking life we either do not forget, or, according to the measure of our consciousness at the time, the lapse is so quickly corrected as hardly to be noticed.

Still, says the Freudian, the suggestion itself points to an underlying wish. This is a nice point; but let it be granted. I venture to doubt whether any wish finds expression in a dream of which the individual is not more or less conscious in his waking life; or, to be specific, whether any one has sexual dreams who is not conscious of sexual desire in his waking life. And for confirmation I will refer the reader to the cases of hysteria reported by Freud and Brill, which seem almost to follow a fixed formula: "At this point" (after a long psycho-analytic cross-examination) "the patient broke down and confessed"—usually that for some time past her whole life had been filled with erotic thoughts, due to unsatisfied desire. Evidently the desires fulfilled in dreams are not different from those of waking life.

Yet, again urges the Freudian, the fact that desires make themselves felt against one's better judgment indicates a resisting agent. Certainly; and just now my typewriter, which for some obscure reason is out of order, is presenting an exasperating resistance; and I am tempted to assume that it has the devil in it. There is quite as much ground for the assumption of a demon in this case as in the other. In both cases what we face (though in different degree) is not design, but the mechanical fixity of unconscious processes.

Any one, moreover, who notes the working of his mind when, for example, he is struggling against dulness and fatigue to finish a task of difficult writing, will find no difficulty in detecting the intrusion of just the kind of symbolic associations upon which Freud bases the interpretation of dreams. And it seems to me that Dr. Ernest Jones, the English Freudian, gives the whole thing neatly away when he tells us, speaking in defence of Freud's vew, that "the intrinsic or logical reactions [i. e., associations] are largely replaced by superficial ones, especially by sound connections"; and, further, when he adds that such reactions are found especially "in children and savages, during intoxication and insanity, in superstitions, folklore, and even in poetry." Were this a reply to Freud, it could not be more to the point. For now it seems that, granting (as common opinion, indeed, has always held) that the ravings of delirium and the images and associations of dreams, furnish a clue to the subject's past experience—just as paint on his fingers might furnish a clue—yet, so far from expressing the systematic meaning of an underground demon, who uses an organized symbolic vocabulary, these associations have no more inner significance than the maudlin silliness of the drunken man, in whom the more mechanical sound associations have replaced the connections of sense, and whose wit seems inspired only because it is unusual. To illustrate this substitution of sound for sense, I find that, a day or two ago, I wrote "under the service" for "under the surface." A livelier imagination than my own may call the substitution humorous; the Freudian, who can discover a sexual motive in the binomial theorem, will doubtless find it obscene.

To the love of the sensational—for it is too easy to retort a more specific preoccupation—we must also attribute the Freudian exaggeration of sex. To the ordinary view it seems that the desires of the body are many. In the Freudian view they form a prearranged system of which the centre and the end are sex; so that sex is bound to be a ruling obsession under all conditions of life. Hence if the dream expresses a wish we must look necessarily for a sexual wish. But here again we may find our answer in the unconscious self-refutations of the Freudians. Brill quotes from Hauptmann, "*Der müde Gebundene träumt von Freiheit*"—as if it were not an immemorial commonplace of fiction that we dream, sleeping or waking, of that for which we most intensely hunger. I have known of a sick person, restricted to a slim diet, who dreamed constantly of good things to eat.

Let us assume, if you please, that the phenomena of neurosis show the prevailing intensest hunger to be the sex-hunger. It will be sufficient to note (as Freud himself somewhere notes in this connection) the conditions of modern social life. Primitive life faces an ever-impending danger of famine and similar privations; but in civilized life, though we worry about the rent, there is little danger that the poorest need starve to death, freeze to death, or be devoured by a wild beast. On the other hand, civilization, by an increasing demand that the sex-relation shall stand for personal sympathy and fellowship, has made the gratification of this bodily desire only more complicated and uncertain; and therefore, on Freudian principles, more intense by repression. This may point to a social problem, but it dismisses the theory of specifically sexual demoniacal possession.

III

Similar motives suggest themselves in the attempt to psycho-analyze "psycho-analysis." Jung reveals the status of this discovery of science when he tells us that psycho-analysis, as an institution, is to be regarded as a "secularized" confessional. Precisely. What we are offered under the awe-inspiring designation of "psycho-analysis" is simply that method of mental relief and of self-control which has been practiced since the beginning of the race in the form of telling your troubles. Freud somewhere hints that Socrates suggested psycho-analysis in his maxim, "Know thyself." This is only another way of stating the same thing. And, though we wonder at the parade of novelty, it argues no lack of insight in the Freudians for appreciating the cathartic and therapeutic value of self-knowledge. It is at least a tenable view that the whole problem of life is the problem of coming to a clear self-consciousness with regard to our wishes and motives; and, at any rate, it seems that our greatest difficulties, those which chiefly paralyze our energies, are due less to the magnitude of our tasks than to doubt and confusion as to what we really want and what we are trying to do. Nor may we doubt that psycho-analysis frees one from the torments of illicit desire—not, however, by the make-believe process of "sublimation," nor necessarily by simple gratification, but rather by giving to the object of desire a definitive valuation in one's scheme of life. When

I can say finally that "this is forever out of the question," the desire ceases.

Penetration of the mystery of psycho-analysis serves only to bring to light, however, a fundamental contradiction in the Freudian theory. The efficiency of psycho-analysis implies that knowing what we do enables us to control our acts for ends of our (conscious selves') own choosing. The theory of demoniacal possession implies that our wishes are at the mercy of a psychological underworld; while the "sensory" theory of consciousness makes the states of the conscious self mere shadows of what is going on under the surface. Evidently the Freudians are unsufficiently disciplined in the problems of psychology. If psycho-analysis is efficient, the underworld becomes rather a tame affair, and the demon hardly worth personifying; while if the effect of psycho-analysis is merely "sensory," then psycho-analysis leaves us where we were.

The Freudians will tell us, doubtless, that psycho-analysis differs from all personal methods of inducing self-knowledge in the fact that it is based distinctively upon positive science. But this we may beg leave to doubt—especially since the positive science in question refers mainly to the Freudian cipher of symbolism. A scientific method is distinguished by the fact that it can be taught, and that its procedure can be reduced to system and rule. In his paper on "Wild Analysis" Freud has given us an instructive picture of the blundering fool who relies for his analysis upon scientific method. Reading Freud's reports of cases, we perceive that successful "psycho-analysis" presupposes a high degree of detective skill, along with a keen power of personal sympathy, which enables one to see the patient as he sees himself. Psycho-analysis is less a science than an art. Freud himself is no mean artist. His reports of cases (as he is not unwilling to admit) show a high degree of imagination and literary skill; and, scattered among the fruits of an ingeniously obscene imagination, there are evidences here and there of fine feeling. It may be that psycho-analysis is to revolutionize the treatment of mental disorder, and perhaps to introduce greater self-control into normal life; but if so, this will be, not because the method is "scientific," but in so far as it is humane.

XII

BIRTH-CONTROL AND BIOLOGICAL ETHICS

To the moral philosopher the question of birth-control, more popularly stated in terms "race-suicide," is a question of peculiar interest. There are few questions which have so large a practical significance and at the same time cut so deeply into the foundations of ethical theory.

There are also few other questions of equal importance which are left in equal obscurity; and none perhaps which can show a more complete reversal of ideas, among practical moralists and social reformers, within a comparatively short period. In 1797 Malthus published the first edition of his "Essay on Population," in which he pointed out that the possibilities of social progress were being set at naught by the constant pressure of population upon subsistence. At once he became the target for all those who stand for "the wisdom of human nature" as against reflective intelligence. But at the same time birth-control became gradually the mark of a superior sense of moral responsibility. About the middle of the century, however, after the appearance of *The Origin of Species,* the tide began to turn from intelligence back to nature. It was now discovered that man is a biological species, and that the seemingly uncontrollable intensity of the sexual instinct is a sacred provision of nature for the perpetuation of the race. Since then the teachings of biological social reformers have been rather in favor of fruitfulness and multiplication, with qualifications in recent years in favor of the best. The result is that those who were commended for wisdom and virtue by the Malthusians are now often execrated as traitors to their race.

At the same time it would be difficult to find another question which can present us with so marked a contradiction between legal commandment and private practice and between social convention and private conviction. The statistics of population render it almost certain that the check upon the birth-rate, which operates more or less among all classes in all civilized countries, not excluding our southern negroes—the exceptions, in themselves significant, being found mainly in Roman Catholic countries—is voluntary and prudential. The most emphatic of those who denounce "race-suicide" can rarely show families that measure up to the good, old-fashioned standard. The theory that diminished fertility naturally accompanies an advance in culture and intelligence seems slightly grounded. Nor may we believe that the result is attained by the simple abstention from sexual relations. In private conversation the contrary is accepted as the mutually understood fact. Yet in any but strictly private conversation we seem to have agreed to denounce all interference with natural processes as a form of "unnatural vice." In most of the states the law forbids the sale of anything to prevent conception, but the law is a dead letter. The medical man, when asked for information, coughs apologetically behind his hand and pleads his medicine ethics; and then he proceeds to tell all that he knows. The Department of Public Morality at Washington, commonly called the Post Office, exercises its extraordinary bureaucratic powers—powers that are scarcely paralleled in any civilized country outside of Russia—to exclude from the mails all literature relating to the subject. This does not prevent the dissemination of knowledge among the more intelligent or the more curious. The chief result is that decently-minded persons are referred to illicit, uncertain, and often unedifying sources of information.

Still more interesting, from the standpoint of the critic, is the fact that the propaganda against "race-suicide" is directed chiefly against the married. One hears occasional derogatory references to those who prefer a single life—a hint perhaps of selfishness and love of comfort—but few seem quite ready to insist that those who are positively disinclined to marriage, or those who are unable to find a congenial partner, ought nevertheless to marry for the sake of the race. And of course there is no recommendation of illegitimate children. It seems, moreover, that even the married may escape reproach if only they are willing to maintain Platonic relations. Indeed it is not impossible that Platonic marriage may be exalted and birth-control execrated in the same breath. This suggests that hostility to birth-control may be not unmixed with primitive superstition. The theory seems to be that Nature, or the Almighty, having in mind our natural depravity, has, for the purpose of preserving the species, made the sex-instinct especially powerful; and that we, on our side, are permitted a degrading gratification in return for services rendered. We may decline to avail ourselves of the privilege—perhaps the Almighty will think better of us if we do. But to accept the pleasure and withhold the payment is a piece of sharp practice. In this connection I am reminded irresistibly of an editor's footnote in an old American edition of Butler's *Analogy,* which I here reproduce:

> Hume says, "though man, in truth, is a natural agent, having all his acts determined by fixed and immutable laws, yet this being concealed from him, he acts with the conviction of being a free agent." Which is the same as to say that God intended to conceal from men an important fact, involving the whole subject of right and wrong, but Mr. Hume found Him out.

The scientific argument against birth-control is based upon the biological conception of man as an animal species, a conception which has been dominant in the interpretation of all human affairs since the introduction of the theory of evolution in the middle of the last century. For a generation bred upon biological evolution it is a little difficult to realize the full measure of the change which this conception has introduced into all of our views of human life. While the older moralists were asking themselves whether self-sacrifice is rational, as if it were a matter for human reason to determine, Herbert Spencer pointed out that, in the biological world—to which we also in some manner belong—self-sacrifice is already more or less common. Even those animals whose dominant protective instincts point to flight may become savage antagonists in defence of their young; on whose behalf the female, in particular, may go to greater lengths of self-forgetfulness than we should expect of most human mothers. Among the insects we find cases where the male in the act of procreation loses his life, sometimes at the hand of the female herself—as if in fulfilling this duty his reason for being had ceased. Arguing from a purely human standpoint, we are apt to say that the first law of nature is self-preservation. The theory of evolution shows us, however, that in nature, in which we live and move and have our being, the law of self-preservation is subordinate to the law of the preservation of the species,

> So careful of the type she seems,
> So careless of the single life.

This is the conception underlying the hostility to birth-control: to interfere with the processes of reproduction for purposes of our own is to set aside the will of Nature.

Coincident with the progress of evolutionary ideas we have noted a growing tendency to emphasize the "social" factor in human affairs. So far has this gone that in present theory morality appears to be exclusively a matter of social obligation; and even those who hesitate before the formal acceptance of socialism are nevertheless disposed to think of all vice as a form of "individualism." From this point of view birth-control is an offence against society; though it is a little difficult to make out precisely against whom the offence is committed—hardly, I should say, against those who, by virtue of birth-control, are never to be. Christian moralists rejoice to see in all this "socially-mindedness" a triumph of brotherly love; but in my opinion somewhat prematurely. The personal quality of brotherly love seems rather remote from economic socialism (for example); nor does "the social organism" suggest very strongly "the communion of saints"; while the primitive clan, the solidarity of which furnishes a standing ground of admiration for contemporary ethics, is only one step this side of the animal species. The truth is that, paradoxically, there is hardly a suggestion of personal fellowship in this emphasis upon the social. "Society" is really only another term for the biological species. And the "social" argument for fruitfulness and multiplication rests, in the last analysis, not upon the needs of a self-conscious humanity, but upon the external demands of a personified "Nature."

Now it is primarily this biological point of view against which—to state my purpose frankly—the present argument is directed. I have no disposition to urge that the race commit "suicide"—to give a literal significance to the sensational formula. Nor am I disposed to regard nature as an enemy. But I hold that the ways of nature are authoritative for man only so far as they commend themselves to human intelligence in the satisfaction of humanly appreciable needs; that these needs must be in some sense the needs of humanity itself, and of humanity in the present tense; and that, as authoritative upon the individual, they must be in some intelligible sense his own needs. So far as the ways of nature can be comprehended by us it is both our right and our duty, as intelligent beings, to control them for our own uses. This applies both to the regulation of the number of offspring and to the means of regulation. And I make express mention of the means, because in the question before us the means appear to raise an even deeper ethical question than the end.

Criticism of the biological point of view in ethics is of course not a criticism of biology. Nor shall I claim that the biological point of view is irrelevant to an analysis of human conduct. Rather must we say that for ethics and psychology the consideration of man as one of the animal species has been nothing less than a revelation. But it is quite possible that a too intensive illumination may be blinding. The present I take to be a case in point. In the contemplation of the similarities between men and the lower animals, as revealed by the theory of evolution, it seems that we have completely lost sight of the differences. And the differences are such as to make the similarities seem almost insignificant. I may summarize them in one sentence: among the vast number of animal species, man is the only animal who knows that he is an animal; he is the only animal who is also a biologist.

This difference has a wide range of implication. Man is the only animal that can be said to have a history; that is to say, the only animal who lives today in the light of accumulated racial experience. He is the only animal who has a science; the only animal who can survey the present fact in the light of facts that are temporally and spatially remote. He is the only animal who may properly be said to have a society; that is, the only animal who can be conceived to act here and now in the light of recognized relations to his absent fellows. He is also the only animal who can be conceived to have any clear consciousness of family relations. I prefer not to dogmatize about animal psychology, for it is always conceivable that animals have a social and cultural life of their own, and that while we are referring the actions of ants to unconscious instinct, they may be making the same observations with regard to us. But taking the animals simply as they appear to us, as being, for example, innocent of physiology, it seems hardly probable that the dog perceives any relation of cause and effect between his copulation with the bitch and a phenomenon temporally so remote as the birth of a pup;[1] nor may we suppose that the bitch retains a consciousness of her parental relation after the period of infancy is past. And any knowledge of remoter cousinship seems quite out of the question. In a word then, as distinguished from the lower animals, man is not merely more developed, or more "efficient"; he is distinguished from other animals by the fact that he has a "culture"; and this means that he offers the only case in the animal kingdom where the processes of life are surveyed and analyzed from the standpoint of those in whom they are taking place.

And this is to say also that he is the only animal to whom we may in any significant sense apply the term "moral"; he is the only animal who is capable of directing his actions according to a clearly conceived purpose, or reasoned judgment of value. And I specify "in any significant sense" because

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[1] Spencer and Gillen (*Northern Tribes of Central Australia*) claim that the Australians are ignorant of the relation of father and child; but this claim, at least as applied to some of the tribes, appears to be at variance with their own observations.

I do not wish to deny absolutely the presence in animals of either morality or reason. I confine myself to the probability that, as compared with men, their range of imagination (including memory) is extremely limited. And imagination, in this broader sense, I take to be the foundation of all value. Value exists in the world only for those who have imagination; only for those who can remember, forecast, analyze, compare, and connect; that is to say, only for persons. When, therefore, we apply the conception of value to biological processes, we are assuming the point of view of a person. The question is then, For whom? When the individual gives up his life for the preservation of the species, whose purpose is fulfilled? The biological point of view seems to reply, For the purpose of the species? But, as I have just pointed out, the individual lower animal knows nothing of the species; nor is the species, so far as we can see, aware of itself. If there be any purpose connected with the species it must be the purpose of an external intelligence. The theologian may then say that the purpose is God's purpose; or the poet may say, Nature's purpose. But the moral philosopher, who begins with human experience, is compelled to admit that the only purpose of which he is certainly aware are our purposes. He may then proceed from this point to attribute a purpose to Nature or to God; and this will doubtless be a matter for consideration in the determination of our own purposes. But throughout the argument the fact of our purposes stands; and the purposes are ours.

For it is not enough to say that "value," in the abstract, is created by our consciousness of self. The more important fact, for our purpose, is that the values created are values for self, valuable from the point of view of the person who creates them. In becoming self-conscious I cease to be valuable merely for others and become valuable for self; or, in Hegelian phrase, that which was formerly only "being for others" is now also "being for self." I may illustrate this important distinction by pointing to the food-cattle. Here we have a clear case of a species which is bred for a purpose. In relation to this purpose the cattle have a value, but it is a value for others. Any value that they may have for themselves we assume to be fully satisfied by keeping them well fed and putting them to death without any unnecessary terror or pain. But this view of the matter depends wholly upon the assumption that their self-consciousness is equally negligible, namely, that the cattle are incapable of suspecting that they are to be killed for food. If they were capable of this, they would also be capable of refusing to breed. And in that refusal we should recognize a moral right. If the cattle could voice such a complaint to us, after the fashion of the cattle in the fables, I am sure that the number of vegetarians would immediately increase. For, through the mere fact of self-consciousness, a new element is introduced into the moral computation and a new person is created with rights of his own.

Now whether or not we are logically justified in attributing a rational purpose to nature, I shall not pretend to say. We have to remember that the theory of natural selection was suggested to Darwin by the point of view of the stock-breeder, and it is quite possible that in applying this conception to nature we get only the reflection of the stock-breeder's point of view. But assuming a purpose in nature—or assuming that she has no purpose—I say that the laws of nature control the individual and exercise a binding force upon him only so far as —for him—they work unconsciously. For the ethical and psychological individual they have no binding power except so far as they derive that power from his own judgment of value. I will even go further and say that when we make the laws of nature absolute in the physical world we presuppose that they work unconsciously. For suppose any individual, animal or machine, to become at any point conscious of the nature and the tendencies of the activities at work in him: the first clear consciousness of this fact will express itself in the statement, Here am I. And what am I doing? And why am I doing it? And the "why" will mean, What rational interest have I—now a rational person, with ideas of my own—in doing this thing? In any being capable of putting this question it is inconceivable that the laws of nature should pursue their course untroubled. In human relations, as soon as we become conscious of any foreign will working its way in us—the will, say, of the advertiser, or the salesman, the life-insurance agent, or the politician—that will is as such at once dethroned. If the foreign will is now to be authoritative its authority must be based upon interests of our own. And this will be true whether the other will is the will of society, of nature, or of God. No person can, with a clear self-consciousness, choose to be eternally damned, for the glory of God, for the glory of society, or for the glory of the species.

Of the activities which are in process of becoming self-conscious the sexual activities of human beings are a typical illustration. If nature is the great stock-breeder, then we shall say that among her various species man is the only animal that really knows that he is being bred. And more than that, he is the only animal which can be assumed to have any intimate knowledge of the reproductive process. His knowledge is far from complete. Our human life as a whole is a mingling of conscious and of unconscious processes, with the unconscious in a large majority. And for all of our study the processes of reproduction are still largely mysterious. Yet our knowledge is sufficient to place them more or less under our control. Nature ordains that sexual intercourse shall be determined by the physical conditions of propinquity and by the physiological conditions determining sexual desire; and then that the fact of intercourse shall commit us inevitably to its natural result. By our knowledge, however, we are enabled more or less to treat the cause and the effect separately and to determine the conditions for ourselves. And this knowledge, as a feature of our self-consciousness with regard to the activity as a whole, profoundly alters the ethics of the situation.

For, to consider the sex-relation first, it reverses the relation of means and end. From the biological standpoint, the sex-relation is a means for Nature's ends; it has no other meaning. But no self-conscious human being can regard his sexual life as a means for the ends of others. By the very fact of his self-consciousness this function, otherwise merely physiological, has become deeply personal and intimately his own. And therefore, while for Nature the sex-relation is only a means, for those intending to marry it is the first and most important part of the end. As a personal relation marriage is its own justification. And this view of the matter, so far from indicating a disregard for moral considerations, is one of the most distinct marks of a higher civilization. Precisely as we advance towards a more refined humanity do we come to feel that in the relation of marriage no ulterior considerations can take precedence of personal choice. Upon grounds of expediency we may forbid certain unions, but it hardly occurs to us to command. We call it prostitution to sacrifice the personal choice for pecuniary gain; from the personal standpoint, biology aside, it seems not less prostitution when the end is the propagation of the species. Certainly a proposal of marriage in these disinterested terms would seem horrible and grotesque. And if it be objected that the moral sanction applies to the personal rather than the sexual relation, the reply will be that of this personal relation the sex-relation is an inseparable part. A man and a woman may have a warm affection for one another where sex plays no part. But this means that the intimacy of thought and feeling has also certain well-defined limits. An exclusion of the sex-relation from married life tends clearly to personal estrangement, if not also to nervous disorder.

I may carry the point further. Among many of the lower animals the operation of the sex-instinct appears to be more or less seasonal and sporadic, and when the bodily need is not actively present the relation appears to be forgotten. The operation of the instinct is thus restricted to its racial utility. This fact is often used as an evidence of the superior normality, if not also of the superior chastity, of the lower animals, and the relatively constant presence of the sex-motive in human life is treated as a sign of decadence and corruption. Such an argument I take to be merely a naïve reflection of the biological point of view. If the sexual life of the animals is more "normal," it is only because the animals are lacking in imagination. On the other hand this lack of imagination reduces the whole of the sex-life of animals to the status of a merely physical need. From the standpoint of a self-conscious agent, it is precisely normal that a relation which is perceived to be desirable should be cultivated and extended. And if this results, among coarser men, in a sensual and obscene imagination, then still I say that even this is a more positively spiritual fact than no imagination whatever.

But I am not arguing for the luxuries of sensualism. I think that it must be a rather dim self-consciousness which can perceive in the sex-desire no larger significance than in the desire for a glass of wine or a beefsteak. The primary fact that emerges from the least reflective analysis of the desire is that it is a desire for another person. In other words, though animal in its beginnings, and sensuous to the end—since human life is never disembodied—to one in whom the desire attains a clear self-consciousness the sex-desire reveals itself as, in the last analysis, a desire for personal intimacy of a unique and precious kind. And this connects it with all that is most valuable in human life.

If you ask me what is this most valuable thing—what is the *summum bonum* of self-conscious beings—I shall reply that it consists in the cultivation of personal humanity through personal relations. From the biological standpoint a personal relation of any kind is simply a means to an end; the relation itself adds nothing to the content of the end. If animals go in herds, it is not for the cultivation of social intercourse, but for mutual protection. And this, as I have suggested, is the standpoint underlying the prevailing conception of society. "Society," in the usual sociological acceptance, is really only a vast business organization for the maintenance of life. Accordingly, personal relations not necessary to this end are treated as superfluous, except as they may be justified upon grounds of necessary recreation. With this view belongs also the doctrine that the end of education is vocational efficiency. All of this belongs to the logic of the biological standpoint. On the other hand the point of view of self-conscious humanity is embodied in the conception of *culture*. "Culture," a word so often misused, stands simply for the development of the person as an end in himself. From this point of view the end and essence of social life is to be found in social life itself, in the development of the possibilities of humanity through *personal* relations. In the cultivation and enjoyment of one another through mutual understanding and fellowship, not as members of a social organization, but as individual persons, and in the spiritual advancement growing out of this mutual cultivation, we have at once the highest good and the end in relation to which natural processes and economic organization are to be treated as means.

Now among these personal relations none is more replete with significance than the sex-relation, and none makes a richer contribution to the content of life. I will not exaggerate by saying that its significance is exclusive or supreme. It is true that in classical literature the sex-motive seems relatively unimportant;[1] and the emphasis laid upon it in modern literature is probably too exclusive. Yet it is a mistake to assume that the classical literature is finer because this motive is lacking. On the contrary, it seems to me that it is just the peculiar insensibility of classical literature to the personal aspect of sex-relations that makes us often wonder why the classics are especially distinguished as "humane."

I have dwelt upon this point because it seems to me that in any discussion of the ethics of birth-control, the rights of the marriage relation as an end in itself are bound to hold a central position. And if marriage is to be regarded as an end, and not merely as a means, it seems to me that the conclusion is obvious: as an end important in itself, marriage should represent a choice unencumbered, as far as possible, by extraneous obligations; and this means that, within the limits of health and safety, we are justified in employing all the resources of knowledge to render marriage fertile or infertile, as those in question may see fit. At any rate, a question of this kind is to be settled by those concerned, from the standpoint of marriage itself. The control of natural processes for human rather than for merely natural ends is now generally accepted as the mark of an enlightened humanity. We have left behind us the day when the use of anæsthetics in child-birth could be condemned on the ground that the pains were divinely ordained. It seems to me that the outcry against birth-control is a survival of this discarded point of view; and that it stands, not for a higher morality, but only for primitive superstition, fortified by a biological view of life.

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[1] This should be corrected to say that the normal sex-motive—concerned with the attraction between man and woman—is unimportant. In Plato, for example, the high-priest of classicism, the homosexual motive plays very nearly the part of love in the modern romantic novel. The beautiful youth is the object of the same "sickly sentimentalism," if that is our phrase—it is very sickly to one not in sympathy with the homosexual motive—as, in the modern romantic novel, the tender maiden. The issue between classicism and romanticism then boils down to a question of the kind of romanticism you prefer—homosexual or heterosexual?

Coming now to the broader question, of birth-control irrespective of the means, I shall confine myself—since my chief purpose is to outline the ethical principle rather than to consider the economic details bearing upon its application—to a brief expansion of the statement that, for an enlightened human being, the question of regulating the number of his children is, so far as the question is an open one, a question of utility, like any other question—for example of building a house. It differs from this question only in calling for a larger and more humane consideration of the utilities.

And therefore to stand for birth-control does not mean that childlessness is to be regarded as a virtue. I find myself disposed to regard those whom I suspect of being voluntarily childless as curiously deficient in human sensibilities—unless I can conceive the probability of a good reason. But upon my own reckoning, I should say that no good reason is to be found in the love of ease and comfort, or of social distraction, or in professional ambition, or in devotion to the arts. As a source of intelligent satisfaction and an enrichment of personal life, it seems to me that children count for more than any of these. They also cost more in terms of thought and responsibility—incalculably more. But everywhere in life it is true that the best things cost the most, and I think that we are entitled to hold a more or less mean opinion of those who refuse to purchase. Yet this is far from recommending unrestrained reproduction. There are many good reasons why the size of every family should be limited. And among them I hold that an excellent reason is just that reason which is most often condemned; that, namely, which considers the possibility, not merely of supporting the family, but of giving one's children a fair start in life, as measured generally by the social standing of the parents. An even more imperative reason is that which measures from all points of view the burden to be carried by the mother. Those who talk glibly about the good, old-fashioned family seem commonly unaware of the fact that many of those families of a dozen or more children represented a succession of two or three mothers. There are also good reasons why some families should be wholly childless. And in the last analysis I say that the question of obligation is a question of the individual interest, broadly considered. I may explain to the childless man or woman that in his own interest he is making a mistake; but if he can convince me of the contrary I can urge no obligation.

This means that when an individual is urged to bring children into the world for the purpose of society, he is entitled to ask why. What is he to get out of it? And what are his children to get out of it? If the purpose be to furnish a plentiful supply of cannon-fodder, in the interest perhaps of certain ruling classes, then I think that he may properly object. A good deal of wit has been expended upon the sentimental song, "I didn't raise my boy to be a soldier" (of which I have heard only the title), but why any one who knows what it is to "raise" a boy, who thinks of the anxious affection expended by the parents and the high hopes and ambitions aroused in a boy successfully "raised"—why he should then think it worth while to raise boys for this purpose, is beyond my power to conceive. And if the purpose be merely to furnish a plentiful supply of unskilled labor for the development of capital—which I seem to detect as one of the motives underlying the hostility to birth-control—I think that he may again object. Addressed to capitalistic parents, the argument is irrelevant; to the non-capitalistic, it is invalid.

And if I were arguing the question from a racial standpoint I should undertake to show that nothing proves more clearly than a consideration of the supply of unskilled labor the need of birth-control for any general diffusion of culture and civilization. For all higher culture presupposes economic freedom. The Greek culture, enjoyed by a few, rested upon a basis of slave-labor. Modern culture, considerably more diffused, is based upon mechanical invention. It is probably correct to say that modern scientific attainment is more than anything else the result of improved means of communication. But as long as there is a plentiful supply of unskilled labor, there will be no progress in mechanical invention. It is only because slavery is now impossible and unskilled labor relatively scarce, that our civilization is more comprehensive and on the whole a higher civilization than the Greek; and the only safeguard against retrogression is a proper measure of birth-control.

We may be told, however, that the purpose of fruitfulness and mutiplication is to maintain the American stock. Then the question arises, In what position do we wish to maintain the American stock? Do we wish to maintain it at the present economic level? If so, the purpose is best accomplished by limiting the American family to those who can be given a fair start in life. But if the American stock is to be degraded, there would seem to be no reason why it should be maintained; certainly not, from the standpoint of those who are to be represented in the stock. And if a more broadly social standpoint is to prevail, then I should say that the obligation rests upon those especially interested to see that, either by state aid—which is hardly conceivable—or by private endowment, special inducements in the form of assistance in the nurture and education of children, are offered for the propagation of the American stock. Private responsibility for the support and education of children presupposes that a man's children are his own.

If children are to be brought into the world for the uses of society it is for society to pay the bill.

Or are fruitfulness and multiplication to be recommended simply for the maintenance of the race? Now I am far from thinking that the race should come to an end. But I believe that, as intelligent beings, supposedly emancipated from superstition, we are at least entitled to ask why the race should go on. And it seems to me that on behalf of the affirmative side it is rather inopportune to raise the question with the generation which has before it the World War. If the civilization of the future is to be merely a repetition of what it has come to recently—and some wise persons tell us that it will never be different—then it seems to me clearly better that the race should not go on.

Nor is it wholly a question of a better time coming. One of the natural results of a view of life based exclusively upon evolution has been a glorification of the future and an exaltation of the duty of self-sacrifice for the present generation. Upon what rational grounds such a duty can be recommended, we are not clearly told. Perhaps if we could believe that by our sacrifice social and racial problems could be once for all solved, we should find the end to be worth our while. But to any reflective mind such expectation must appear illusory. In the nature of the case evolution is an unending series of new wants that are developed through the satisfaction of old; if no new wants appeared, evolution, and life itself, would come to an end. We may therefore anticipate that for any future generation life will be as problematic as it is for us. I am not sure that this is a pessimistic conclusion. But it seems to show that we are justified in allowing the future generations to take some responsibility for themselves; and on the other hand it is quite conceivable that the best that we can do for them will coincide pretty closely with the best that we can do for ourselves. I am inclined to think that this is the case with birth-control. In any case it should be clear that a life process which consists only in a series of sacrifices—the present generation sacrificing itself for the next, which again sacrifices itself for the next, and so *ad infinitum*—is an absurd conclusion for a race of supposedly rational beings.

XIII

CONSCIOUSNESS, WHERE IS IT?

I SUPPOSE that even a behaviorist will recognize a difference between having a toothache and seeing (or perhaps hearing) your neighbor have a toothache. This difference I shall call the difference between the point of view of the agent—or, it may be, the patient—and the point of view of the observer. And in attempting to show where consciousness may be found, I shall take as my point of departure the agent's point of view rather than the observer's. Not perhaps because consciousness may not be defined and distinguished by an observer, but because it cannot be distinguished by an observer unless he is also an agent.

This is my objection to the method of distinguishing consciousness by reference to the specific mode of response belonging to creatures having a nervous system. What is this specific mode of response, and how does it differ from the responses of waterfalls and steam engines? It seems that those who resolve consciousness into a specific response are unable to specify the response; and I believe that they could not distinguish conscious from unconscious responses without presupposing just that "inner" point of view which they seek to define away. I can imagine a similar problem. Suppose that we are asked to explain the difference between written language and other marks that may be made upon paper. The answer may be that language is made up of the specified marks, or relations of marks, that have meaning. But of course any marks whatever may have meaning—if only we have found the point of view of the person to whom they are significant. There is no specific grouping of marks necessarily peculiar to language. Neither, I venture to say, is there any specific form of reaction peculiar to a nervous system. The sounds uttered by the creature with the nervous system may be English, Chinese or mere gibberish. To one who already attaches meaning to them they indicate consciousness; and to him they are also specific. To any one else they are not even specific. Gibberish, for example, is never specific.

Accordingly, in seeking an answer to the question, Consciousness, where is it? I have in mind, at the outset at least, not so much my neighbor's consciousness as my own. Where in the world of my experience do I find what I call my consciousness?

First I shall reply, Not in any so-called "mental states," as distinguished from corresponding physical things—not in any specifically "mental" images, sensations, impressions, or presentations. That is to say, I agree with those who hold that when we perceive a chair what we have before us is not a "perception" but a chair. And I should say the same thing of memory of the past. When I remember what happened last Christmas, I do not have a "mental image" of last Christmas, by means of which I arrive at the real events of last Christmas; on the contrary I am living in last Christmas, in the same way as I am living in today. In other words, I find in my experience no series of "inner experiences," such as Kant assumes, which are distinct from a parallel series of "outer experiences." My perception of things is not a perception of perceptions but a perception of things.

And if I do not find my consciousness in any such mental states as "perceptions" or "presentations," neither do I find it in any other mental states, called feelings, or emotions. Those who fail to find their consciousness in perceptions may take up as second line of defense the position that, at any rate, in their emotions they have something peculiarly and exclusively mental. If they have no cognitive states which are numerically distinct from the object known, at least they have other mental states to which there is no corresponding object whatever. It seems to me, however, that after James's theory of emotion this distinction is no longer tenable. James has shown, I should say, that emotion, whatever else it may be, is a consciousness of bodily movement. Now the consciousness of bodily movement is by no means the same as unconsciousness bodily movement—just as the perception of a chair is a different fact from the unperceived existence of a chair. But just as the perception of the chair is not to be found in a state numerically distinct from the object chair, neither is the emotion to be found in any state numerically distinct from the bodily movement of which it is the consciousness. The point of the matter is that all consciousness is in varying degree—cognition more clearly and emotion less clearly—consciousness of an object. If we are seeking for our realities in clearly marked things, numerically distinct one from another, we are likely to find objects before we find consciousness. Indeed, as regards the prior immediacy of mental states, it strikes me always as an interesting reflection that, although every one seems to know what we mean by a chair, no one seems to know what is meant by an idea of a chair.

Where in the world then is consciousness? I state the question thus, because I wish to ask in reply, Where in the world is it not? When I turn once more to the familiar chair and attempt to describe it, the first thing I find is that it has legs, arms, back, and seat—very human attributes. And if I try again, resolved now to describe the chair in terms wholly impersonal—well, I seem to find no such terms which in the last analysis are really important. If, for example, I discard the word "legs" for "uprights," I am reminded that things are upright or the reverse only in relation to the position of the human body. In brief, I can frame no description of the chair without making it to be an object qualified by the fact that it is humanly known. This means that I find consciousness in the chair.

This is perhaps to repeat the more or less familiar doctrine that consciousness of the chair is to be found in the meaning of the chair. The use of the term "meaning" raises, however, an important question. Does the meaning of the chair leave the chair unaltered? Those who define consciousness as a relation, and meaning as a relation—the relation, namely, between an object and a living organism—insist also that all relations are external: consciousness of the chair leaves the chair unaltered. Now, as a matter of fact and experience, it is only for the observer—and for him only relatively—that the chair remains unaltered; when I explain the working of an automobile or a typewriter to a supposedly uninformed neighbor the object is constantly changing for him while it remains nearly the same for me. It is thus an external observer's point of view that is quietly presupposed in the doctrine of external relations and in the definition of consciousness as a relation—as if, somehow, the facts of our world, which each of us perceives for himself, could only be described in the way that they appear to other persons; or perhaps to no real person whatever. And it is this point of view which makes consciousness as a relation seem unrecognizable as consciousness. If consciousness is nothing but a casual relation between an object and a living organism, then surely the neo-realists are right in saying that consciousness is not more important than other relations. But it seems to me that we must then go further and ask why the term "consciousness" was ever invented, and why this relation is worth any consideration whatever.

What I would point out then is that, from the point of view of the person who is conscious of an object, the meaning of an object is not extrinsic, or additional to, or separable from, the object itself. The chair as perceived is not independent of the meaning of the chair. The chair does not remain the same, for the same person or for different persons, while the meaning changes. The structural detail of the chair is not a constant fact while our idea of its function varies. Nor again is the perceived chair an entity; the meaning, however, a nonentity. Whatever an entity may be, the meaning of the chair is as much or as little of an entity as the perceived chair; for what we perceive varies strictly with the meaning we are able to assign to it.

I find it difficult to illustrate this point forcibly in the case of the chair, just because, in civilized life, the chair is a universally familiar object which each of us, so far as memory extends, has already known, and the meaning or function of which has remained virtually constant. To measure our consciousness of the chair we should have to compare what we ourselves see in a chair with what is seen by a primitive man who is confronted with a chair for the first time; let it be remembered that to an uncivilized person the function of this piece of furniture is by no means necessarily obvious. We may, however, compare the chair as seen by a mechanically intelligent person with the chair as seen by one, perhaps of the opposite sex, who has no mechanical interest. Suppose I ask such a person how the back of a given chair is supported against the strain imposed by the back of the sitter—obviously this is one of the chief problems in the designing of a chair. Is the back of the chair of one piece with the back-legs? Or is it a separate piece and then braced? Or is it of one piece and also braced? These of course are matters of perception; yet I think you will agree that these questions will elicit various answers, and that the answers will vary according to the ideas possessed by the respondent of the function of the parts in question.

Suppose, however, we take an object which each of us remembers having learned to know. I began to use a typewriter, say, five years ago. I cannot now remember how the typewriter looked to me then. But if after the first presentation I had been asked to draw from memory a detailed picture of the typewriter, I am certain that, beyond the general shape of the machine, I should have been able to give you little more than the keyboard and the platen, or roller. My idea of a typewriter was thus little more than an impression of a vague mass of mechanism, of a certain shape, which served the purpose of writing. My picture of a typewriter today, though still more or less impressionistic, would be obviously much richer in detail. This difference represents then not merely a difference in "knowledge about" the typewriter—to make use of James's distinction—but at the same time a difference in "acquaintance with" the typewriter; it is a difference of perception. Indeed one way of stating my point is to say simply that acquaintance with an object cannot be independent of knowledge about it. Nor can knowledge about be independent of acquaintance with. For, while my perception of the typewriter has developed in the multiplication and in the coördination of details, my conception of its function has similarly developed. In noting one by one the several devices—for example, for beginning a new line, for changing from lower to upper case, or for shifting the carriage so that letters shall not overlap—I have come to realize more clearly just what a writing machine has to do.

And indeed it seems that, for the person who is learning to know an object, meaning and perception, structure and function, *must* go together. Here, for example, is a certain plug at one end of the carriage which, it turns out, regulates the space between the lines. Now I may contemplate this plug vaguely or I may perceive it exactly. But I cannot perceive it exactly without noting its connections and its precise setting; and in a perfectly clear perception of the setting the function is *ipso facto* revealed.

The chairs and the typewriters are things of human use, and we know that a meaning has been put into them. Our consciousness is found, however, in the meaning that they have for us, as percipient subjects; and therefore the same analysis applies not less—or perhaps I should say, only less—to the objects of nature—for example, the mountains and the trees. The distinction of mountain and valley, however correspondent to outer fact, holds its place in our consciousness by virtue of the fact that, given our human powers of locomotion, the valleys are the great arteries of culture and communication. From the point of view of civilization the distinction of mountain and valley is vital. To the geologist it is relatively insignificant—a mere detail in the crumpling of the earth's crust. To the astronomer it counts for nearly nothing, except as the mountain furnishes a convenient site for an observatory. Apart from this consideration, an astronomer, absorbed in his special subject, might be supposed to be as imperceptive to the distinction of mountain and valley as Hegel is said to have been to the Battle of Jena.

And the trees. This illustration, as it happens, suggests to me another way of putting the matter. We cannot disentangle our consciousness from the object so as to view it alone; neither can we disentangle the object from our consciousness. For suppose we ask what is the real tree, as viewed by impersonal science. Now the aim of impersonal science is to get its object wholly disentangled from the subject, wholly divested of qualities that imply a human interpretation. If then we regard the tree as an organic unity which expresses a certain arboreal principle of life it seems that we have not yet reached the impersonal view—certainly, if we judge by the general hostility of biological scientists towards vitalistic theories and their steady search for a mechanical explanation of life. But if we treat the tree as a mechanism we seem driven in the end to define it as a collection of atoms. And then we face the question, What marks off the collection? In human experience the tree stands alone, in an empty field; for impersonal science the same tree is only a part of a sea of atoms which includes the air as well as the tree. The atoms composing the tree are doubtless nearer together; and to us men this means collision and resistance when we try to walk through them. But imagine to yourself a physicist of divine insight, a physicist whose thought were so perfectly learned that with the vulgar he could not even speak. To him, it seems, the distinction of solid tree and empty air must be wholly insignificant. To him the tree and the air would be alike simply an expanse of atoms; and, having no scientific reason for marking those specific differences of density and rarity, he could not even see that the atoms were differently grouped. In brief the tree must be to him, at most, what the man in the moon is to us—merely a convenient fiction; and if we are to speak of entities, then a nonentity, or nothing.

But I shall not myself say that the tree is nothing; or that it is nothing but consciousness. If consciousness is to be distinguished from the object, the object must be no less distinguished from consciousness; all that I say is that, from the point of view of the agent, they are not separable. If we look for the object in some separable, impersonal, non-conscious, non-human, and non-significant element, or "entity," in our experience, we shall never find it.

This brings me, however, to a general statement of my thesis. Hitherto I have kept in mind the point of view of the agent; and perhaps I have invited the objection that the existence of this point of view—or, for the matter of that, the existence of any point of view—is just the point in question. Very well, then: having obtained the facts which the point of view has to offer, we may now, if we like, pour the contents of all points of view into a loosely general world of fact and note simply a broad outstanding distinction. Everything in the world, we may say, undergoes two sorts of changes. (1) On the one hand it suffers the changes that I have noted in my typewriter; that is to say, it passes from a thing of indefinite parts, or aspects, incoherently related, to a thing of relatively definite parts, coherently related. These changes it undergoes when brought into relation with some particular percipient agent—they represent the agent's view. (2) But on the other hand it undergoes changes which seem to be independent of its relation to a particular agent. The real typewriter, as we call it, was never vague, never indefinite, and never incoherent; as an objective fact it is at any moment simply what it is; neither indefinitely nor incoherently so, nor yet indeed (if our description is to be strictly objective) definitely nor coherently. The changes which the real typewriter has undergone are somewhat as follows: the frame has lost some of its varnish; the parts are worn—which means that they now weigh less; and they have accumulated dirt and rust. Such changes are irrelevant to changes in definiteness and coherence. Now the series of changes indicated under (1) is consciousness. Viewing them as items in a general world of fact, and ignoring the point of view in which they are given, we shall have to say that these are changes in the typewriter quite as much as the changes of wear and tear; for apart from the typewriter they do not occur. If then we are to locate consciousness in a world of general fact we must say that in these changes of the thing known we find our consciousness.

To characterize this conscious side of things I might perhaps use the word "meaning." But this word, as I have suggested, fails, as it is now used, to suggest with sufficient clearness that meanings, so far as they are meaningful, are personal; or that they are also bound up with changes in the object. The term "control" I reject as insufficient, because it seems to me to suggest, from the standpoint of a biological pragmatism, that consciousness is not for itself, but for something else; or that consciousness is exclusively forward-looking. From the standpoint of keeping the body alive, it may be that the future alone is relevant and real; but from the standpoint of the conscious realization of life the past may be even more real than the future.

It seems to me that the peculiarity of the conscious side of things is best expressed in concrete terms by the words "familiarity" and "intelligibility" and by the contrast suggested by their opposites "strangeness" and "opacity." I add familiarity to intelligibility because the intelligibility that I have in mind is personal intelligibility. Every thing in our world has a certain degree of familiarity and intelligibility. That which is wholly foreign and inscrutable lies beyond our ken; at the most it gives us a vague impression of "something there." On the other hand everything has a certain strangeness and opacity; in everything we reach a point at which it ceases to be transparent and intelligible. In the familiarity and intelligibility of things we find our consciousness and ourselves; in their strangeness and opacity, the limitations of our consciousness and of ourselves.

I know of no more striking illustration of the presence or absence of consciousness than the changes which come over a place which is now familiar, but which was once unfamiliar. On the first day of a four-months' stay at Stanford University some years ago a colleague invited me to walk in the surrounding country. I returned with a few memories of details, a general impression of loveliness, and a vague, and largely erroneous, conception of geographical relations. In the course of many walks afterwards I gradually arrived at a clearer picture and a more exact orientation. But I had always difficulty in adjusting my clearer knowledge of details to the ideas formed on the first day. This is a common experience. After becoming familiar with a place—or with a person—we always wonder at our first impression. "It is not the same place." And the point of the matter is that it is *not* the same place. The place has not merely "acquired an aspect of familiarity"—an aspect superimposed upon an otherwise unchanged content—but the place itself has changed. Yet all the while it has not perhaps "really" changed. The changes that go with familiarity mark the awakening of consciousness.

To conclude, then—to the question, Where in the world is consciousness? I reply, Where in the world is it not? I have tried to show that consciousness is not "in the mind," but in the world; but, on the other hand, that consciousness is really in the world, and everywhere in the world. So far as the world is familiar and intelligible there we find our consciousness and ourselves; and what is absolutely unintelligible is not in our world. Consciousness is not a casual relation between supposedly impersonal things. It is not a mere "relation" between "entities" more substantive than itself. In speaking of consciousness as a series of changes observable in things I have been adapting myself to what seems to be now the conventional necessity of using phenomenalistic language. But if I may use the realistic language which I prefer I shall translate the series of changes into persons and say that persons are as real as anything else. In the familiarity and intelligibility of things I find myself; but I am myself no less substantive an entity, and no less of an immediate and original fact or phenomenon, than the things with which I am familiar.

XIV

THE HUMAN SOUL AND THE SCIENTIFIC PREPOSSESSION

I

To the philosopher, who views life under the aspect of eternity, and whose sense of humor is undisturbed by the solemn platitudes of the popular magazine or the authoritative pronouncements of an up-to-date daily press, nothing, I think, should seem more characteristic of our day, or more interesting as a feature of a supposedly critical age, than the scientific prepossession. By the scientific prepossession I mean that conception of present thought according to which, after centuries of darkness and superstition—animistic, anthropomorphic, theological, metaphysical—we have now, in the view of the world known as "modern science," emerged into the clear, if sober, daylight of hard and naked fact. Briefly, it is the prepossession that all ages have been ages of prepossession except our own; that all former ages have viewed the world through the medium of human prejudices, from which we, happily, are free.

One may find the prepossession in evidence at any gathering of natural scientists, and especially in their after-dinner speeches; in which they find a never-failing amusement in recalling how our ancestors believed that the magnet "attracted" the iron, and that nature "abhorred" a vacuum; as if nature, like ourselves, were actuated by likes and dislikes. That possibly every age has seemed modern to itself, and its knowledge modern knowledge; that to itself every age must have seemed to live in the light of simple fact after a darkness of ancestral superstition—by such reflections their enjoyment is untroubled. Nor are they disturbed by remembering that the science of our own day is committed to a comprehensive theory of evolution. To suggest that our descendants may smile at "modern science" as we now smile at mediæval scholasticism, seems shocking and scandalous. In the evolutionary theory of modern science it appears that all things in life are subject to the change and decay of evolution except modern science itself: whatever else may change, the scientific point of view must be regarded as final.

And, doubtless, because the point of view of science is the point of view of simple fact—such is the scientist's understanding of the scientific prepossession. Before undertaking to exhibit the prepossession in its recently perfected form I shall venture to explain, therefore, what is meant by simple fact. If we place before us any human action, any state or condition of human life, we shall see that two very different questions may be asked about it. One is, how does it feel? The other is, how does it look? How does it feel to play tennis or drive an automobile; and how does it look—to one who has never had the experience? How does it feel to be grown up, to wear evening clothes, to be president or professor, to be a parent, to be married, or to be in love; and how does it look? Doubtless the last case will serve to suggest that how it looks is often very different from how it feels. No one will question this who remembers how it felt to be young, to be ambitious, and to be in love, and who notes how it looks now.

Let me call these two views of life the inside and the outside view: philosophers prefer to call them "subjective" and "objective." Common sense, however, in its view of human life at least, insists upon using both. Do you wish to know the truth about life, what it really signifies to be a child or a parent—or to be a millionaire or a day-laborer? Then it is not sufficient to ask the mere observer of childhood or parenthood, while ignoring the children or parents themselves. Nor, on the other hand, is it sufficient to question the child or the parent; for neither child nor parent can from his exclusively inside view tell you all that childhood or parenthood implies. Common sense insists that both views of life be consulted, even if they tell a different story.

Before we "got" modern science—a very recent conversion, by the way, in the whole history of thought, since a really organized modern science is scarcely two generations old—it was assumed that the distinction of inside and outside applied, not to human life alone, nor merely to human and animal life, but to every existing thing. We need not go back to the primitive man, who assumes that the river which drowned his friend bore him a grudge. Aristotle, who was not precisely primitive, can seemingly conceive of nothing, be it a man or a dog, a chair or a river, as quite real—as being all there, so to speak—unless, in addition to its material structure seen from the outside, it is also the embodiment of an idea, or a purpose; unless, that is to say, it has an inside as well as an outside. To Aristotle the hard, material fact, which in our day is so easily accepted as self-existent, was as abstract and as unreal as a door with only one side or a triangle with no sides. And how lately the Aristotelian way of thinking has become antiquated, we may gather from the deference paid to "the wisdom of nature" until a generation ago, and not wholly lacking today in scientific medical practice. Even the eighteenth century, sceptical and sophisticated, found difficulty in conceiving of an order of nature from which, as a whole, thought, or design, could be absent. Nor am I certain that, if we come to the twentieth century and question the motives of the up-to-date physical scientist speculating in atoms, electrons, ions, or what not, we may not find that his quest for the "inner constitution of nature" is after all, in plain terms, simply an effort to comprehend how the natural processes *feel,* within themselves, as distinct from how they *look,* to us.

But here the natural scientist cries, "God forbid!" Behold then the scientific prepossession. Common sense tells us that human life at least has both an outside and an inside. Aristotle teaches that this applies to all things whatsoever that are concrete and real. The scientific prepossession consists in an exclusive emphasis upon the outside, affirming that no other side exists. This is what the scientist means then when he tells us that the scientific point of view is the point of view of simple fact. The primitive man assumed, quite naïvely indeed, that, like himself and his human neighbors, everything in the universe has two sides; that of the stars, for example, you may ask, not only what a star looks like, but what it means *to be* a star. The scientific prepossession began by denying the inner view, first to the stars; then to all of what we call inanimate nature; presently to the lower forms of animate nature; and now it proposes, as a final step in the extension of science, to deny the inner life to you and me.

II

It is this final stage in the development of the scientific prepossession, together with the steps immediately preceding, that I propose now to exhibit as it appears, written large, in the science of psychology; that is to say, in the application of experimental methods, by means of apparatus often highly complex, to the study of the human mind. "The science of mind"—or suppose we say, "the science of the soul": in the mere juxtaposition of terms I seem to detect a humorous incongruity. Yet surely we are not entitled to object to experimental methods if they will tell us something. One might suppose, however, that the best way to study the mind is to converse with mind; that experimental methods would tell us nothing about the mind except so far as we are able to give the results a *mental* interpretation; and therefore that, in order to study the mind, one must first of all have a rich experience of mind—in other words, a broad and sympathetic appreciation of literature, a cultivated and instructed taste, and, above all, a thoughtful experience of life.

Not so, however, the science of psychology. No one ever thinks of demanding these things from the "expert psychologist." Scientific psychology is the outcome of the depressing discovery that, while in other fields of inquiry men were engaged in making brilliant discoveries and in piling fact upon fact, our knowledge of the mind remained in the region of doubt and of interpretation. The question was hardly raised whether the mind—or, as I prefer, the person—is not, of all things in our universe, the most delicate and inscrutable, and therefore the last to be made—if ever—transparently clear. What was noted rather was that, in other fields of inquiry—in physics, chemistry, and biology, for example—discoveries were made as the result of scientific method, aided by laboratory apparatus. Hence, it was concluded, for a real science of psychology the important thing is not a deep experience of mind on the part of the scientist, but scientific method, supported by ingenuity in the invention and use of apparatus. Given the scientific method, no vital experience of the subject-matter is necessary. You press the button and the method does the rest. A compositor needs no appreciation of literature to produce a page of good poetry; just as little does the scientific psychologist need a personal experience of mind.

Thus is mind banished from the psychological laboratory. For it is equally unnecessary that the subject of psychological experiment be endowed with mind. As a recent writer has remarked, in entering the psychological laboratory you check your soul at the door. The rules of scientific method forbid indeed the admission of the soul; for to admit the soul would mean that you intend to understand your subject as he feels to himself—by sympathetic appreciation; and sympathetic appreciation, as we have seen, is the method employed by unscientific primitive man. Thus it comes about that, while the professors of other laboratory subjects are eager to secure beautiful specimens, in the psychological laboratory you rarely find a subject chosen for his intelligence. Any featherless biped will do, and if it happens to be of subnormal intelligence so much the better.

Nor does an inspection of laboratory methods suggest a need of intelligence. The typical thing is to measure a man's reaction-time, that is, to find out how quickly he can respond to a signal by pressing a button, using for this purpose an elaborate system of electric keys, magnets, and wires, in connection with an electric clock. The apparatus is fascinating; but after getting the results you know as much about the man's mind as you knew before. Or you harness him to another apparatus, equally delicate and ingenious, for recording the variations of his blood-pressure upon smoked paper. While thus harnessed, you give him doses of pleasure or of pain; you tell him a funny story, or perhaps a sad one; and with each change of stimulus you note a simultaneous change in the line recording his blood-pressure. But what kind of change goes with funny stories and what kind with sad ones, the apparatus seems not yet to have shown. Or perhaps you apply to him the "sensory tests," to determine his sensibility to differences of color, pitch, odor, weight, or what not; or the tests of "motor-coördination," that is, of manual dexterity.

For these typical psychological experiments not only is activity of mind unnecessary—since the most that the subject has to do is to say which of two things is bigger—but it is a positively disturbing influence. If the subject stops to think the result is thus far vitiated. In the general conception of scientific method the purpose of experiment, as distinct from mere observation, is to eliminate disturbing conditions; as applied to psychological experimentation it seems that the purpose is to eliminate the presence of mind. Thus, if you were shooting at a mark with a rifle, you would make it a point to find out before each next shot where your last shot had hit; otherwise you could not shoot intelligently; nor, moreover, would the result be regarded as a test of your markmanship. But in psychological tests knowledge of the last shot is strictly forbidden, and you are forbidden even to speculate about it. For here the purpose of a repetition of shots is to strike an average, and the computation of averages requires that each shot be fired under the same conditions—obviously the conditions of ignorance.

But if by chance mind happened to enter the psychological laboratory it could not remain there. Upon this point *crede experto.* I have spent many hours acting as subject in the psychological laboratory. I have countless times lifted each of a pair of weights, one after the other, and reported whether the second was heavier or lighter. I can testify that, after a few minutes of this kind of exercise, all that remains of the mind is a conviction that it can make no possible difference whether the second is heavier or not; with perhaps a dull wonder as to how many of the tests are yet to come. Indeed I should be ready to propose, as a measure of social economy, that we utilize our more hardened criminals as psychological subjects, if this were not certain to be forbidden on the constitutional ground of "cruel and unusual punishment."

The scientific psychologist consoles himself with the reflection that, if the facts discovered in the laboratory are not very exciting, they are at any rate "scientific facts." One phase indeed of the scientific prepossession is the belief that a fact is not fully a fact unless it is discovered in the laboratory; or at least by an expert scientist in his official capacity. Psychological laboratories have been in operation for thirty years or more; and for more than twenty years I have been searching for one fact worthy of consideration—for one "discovery," so to speak, as measured by what they call a discovery in other sciences—for one such fact discovered in the psychological laboratory which did not repeat what we already knew, or which required a laboratory for its discovery.

Several years ago I thought I had found a little one. A distinguished psychologist, in a public lecture which I attended, was explaining the value of the psychological laboratory. We all know, he said, that imagination may be mistaken for reality, but it required the laboratory to show with scientific certainty that reality could be mistaken for imagination. I can give only a rough outline of the experiment reported. The subject is seated facing a screen of ground glass behind which, unknown to him, there is a projection-lantern, and in the middle of which, if I remember correctly, there is drawn a circle of a few inches in diameter. He is told to look at the circle and to imagine that it is red. Presently the area of the circle begins to be tinged with red and since he is unaware of the fact that a projection-lantern is being operated behind the screen he takes this reddish tinge to be the product of his imagination. That reality may be mistaken for imagination is thus demonstrated by scientific method.

I will admit that, as I walked home after the lecture, I felt that I had received a demonstration. The "discovery" was not precisely awe-inspiring, but did it not amount to a vindication of scientific method? How could one have unearthed such a fact except in the laboratory? Then I suddenly remembered. A few evenings before it had happened that my wife, who was sitting in my study reading, had laid down her book, assumed an attitude of listening, and then after a moment, taking up her book again, had remarked to me with a smile that she was so accustomed to listening for the baby's cry that she often heard him cry in imagination when in fact he was quiet. Whereupon, having just imagined the same thing myself, and doubting that we could both be victims of imagination, I opened the door and discovered that the infant was really crying. Here then it was demonstrated, in the heart of the household, with no apparatus except a baby, yet with all the scientific rigor that one could reasonably desire, that reality may be mistaken for imagination. And what is more, it was shown—to my own amusement after taking the matter seriously—that the mistaking of reality for imagination is a most commonplace experience, likely to occur in any case where the object in question is rather faintly perceived.

Indeed, for the student of mind who keeps the eyes of his mind open, there are a hundred facts to be got from ordinary intercourse with men for one to be "discovered," with elaborate ingenuity of apparatus, in the psychological laboratory. Such facts count for nothing, however, with the scientific psychologist; they are not "scientific" facts. Possibly not; yet I cannot help thinking of the very correct sportsman portrayed in *Life*, who explained his failure to bring home snipe by the fact that he "hadn't his sniping-coat on."

III

A few years ago, when it began to appear that the scientific method was paying no dividends, an attempt was made to boost the stock by applying the method to the study of mind in animals. Here again it would seem that, if we would grasp the psychology of animals, we must, so to speak, converse with animals. We must live with them; and we must not only note what they do, but we must strive to understand their motives. We must try to see the animal from the inside. To the scientific psychologist, however, any sympathetic study of animals is mere nature-faking. His own method may be illustrated as follows. He desires to know, for instance, whether the dog is capable of discovering that red lights point in the direction of food and of freedom, while white lights point nowhere; and how long it will take the dog to find out. Accordingly, he places the dog in a maze, consisting of a complicated arrangement of paths marked by red and white lights. If the dog follows the red lights he will find food and relief at the end; but the white lights will only keep him forever in the maze. Perhaps, however, the dog is indifferent to the investigation. To overcome this difficulty the psychologist used to starve him. Latterly, I believe, he prefers to carpet the floor of the maze with electric wires, by means of which he may give the dog a gentle hint, in the form of a shock, whenever the animal seems disposed to give up the task. In the end he finds out how long it takes the dog to learn that red lights contain the promise of relief; and then, so far as the mind of the dog is concerned, he knows just as much as before.

Now for a companion-picture. Imagine with me the dogs of my college town assembled in a psychological congress for the purpose of learning how long it will take a man to discover that a given series of scents—which mean probably only a little less to the man than colors to the dog—leads to safety and freedom, while other scents will only lead astray. Let us assume then that our canine congress has marked the town with a maze of olfactory paths, one path, the path of freedom, being marked with a series of odors of oil of cloves, the other paths, which only return upon themselves, marked by odors of mint, wintergreen, asafœtida, or what not. Then suppose that you are one of my fellow citizens on your way home some late evening, indulging, in the quiet of the night, in philosophical meditation. Suddenly you find a pack of dogs (the investigating committee) at your heels. Their threatening attitude starts you on a run. Whenever you are disposed to halt, for the purpose perhaps of trying conciliation, one of them gives you a nip in the leg. Let me ask how soon you would expect to discover the path marked by oil of cloves, or to grasp its significance, and what value a test conducted under those conditions would have as a measure of human intelligence. For my own part, I believe that the test would demonstrate that the dog is more intelligent than the man; for in point of fact the dog does eventually discover the way out, and I cannot conceive that the man would ever discover it.

What does the dog think about animal psychology? Of course I cannot say with certainty, but I can relate a strictly true story. Several years ago I strolled into the laboratory-room of a pupil and friend who was conducting such an investigation as I have just described under the guidance of the professor of psychology; and on his desk I saw a book which appeared to have been gnawed by rats, the upper half of all the pages having been destroyed. In response to my curiosity I learned that my friend, after putting his cocker spaniel through the maze, had taken the dog to his home. As soon as the dog entered the house he made for the bookshelves and with his paw scattered a whole shelf-full of books over the floor. Then, selecting the book I had seen, he proceeded to chew it to pieces. It was the standard textbook on animal psychology.

I have introduced the reference to animal psychology because it marks a definite stage in the process of applying the scientific prepossession to the study of human life. Animal psychologists were not long in discovering that they learned nothing to speak of about what the animal felt or thought. But they had embarked upon a programme and established a science. Therefore they said, "What difference does it make? If we cannot study the animal *mind,* we may at least study the animal *behavior;* and behavior is after all the more definitely scientific fact. Accordingly, by animal psychology we shall hereafter mean animal behavior; 'mind,' in other words, shall be simply 'behavior.' What shall we say, however, of human psychology and the human mind? May we say that the human mind is likewise nothing but behavior?"

So far from being disturbed by this turn of the argument, the psychologists—at least a now considerable school of them—welcomed it with joyous relief. Why not? Is not this precisely the conception that we need to make psychology a full-fledged science? For years we have been pretending to study the human mind; yet in point of fact we have never found anything in our laboratories but human actions. And what else is there to observe there? Let us therefore announce boldly that psychology, whether human or animal, is a study simply of behavior.

Shall it be admitted, however, that psychology is *not* a study of mind—in other words, that, the existence of mind being conceded, the scientific psychologist confesses an inability to grasp it? Here again the psychologist proved equal to the occasion. Science, he now explains, is a study of realities, and the only genuine realities are the scientific realities—those reached by the application of scientific method. But scientific method, when applied to the human mind, discovers nothing but human behavior. Behavior is therefore all that is real in "mind." What we call the human mind is the behavior of the human body—that and nothing more. Mind, in the sense of an inner, personal, spiritual experience, must be laid away, along with the immortal soul, among the discarded superstitions of an unscientific past.

IV

Thus has the mind been abolished by act of Parliament. And not only for the psychological laboratory, but for human society and the human race. In this behavioristic psychology we behold the perfected beauty of the scientific prepossession. The scientific prepossession began by saying that the only thing real about the heavenly bodies is how they look; it ends by saying that this is the only thing real about you and me.

To be sure, not all the behaviorists are as simple-minded as their theory of mind. The logically more sophisticated have provided an avenue of retreat through a private definition of "behavior." There are others, however, who take the behavioristic conception in all its native simplicity. According to them, your behavior is simply and solely what other persons are able to observe; and how you look, not to yourself, but to the world—that is all there is of *you*.

One of the more diverting of these has been able to combine his own view with that of the Viennese psychologist, Sigmund Freud, scientific interpreter of dreams and professional misinterpreter of human life—himself an enchanting illustration of the scientific prepossession. The idea common to both is that the "expert psychologist" knows much more about any man than the man can possibly know of himself—not only with regard to his external actions and his past history, externally speaking, but also with regard to what we should call his motives and feelings, but what the behaviorist would define simply as what he is going to do. Thus, according to Freud himself, if I am unfortunate enough to forget your name, it means that I look upon you with hatred or contempt—and this in spite of my assured conviction that my feeling toward you is one of unqualified affection and respect; according to our Freudian behaviorist, it means that I am on the way to do you an injury. And thus again—to make use of one of the latter's most beautiful illustrations—if I meet you at the railway station and desire to know whither you are bound it would never do simply to put the question to yourself. It means nothing that you think you are bound for Boston, for what you think is not real. The thing to do is to consult the external evidences of your "behavior"; to begin perhaps by ransacking your pockets or your traveling bag—as if you were intoxicated; or perhaps to call a private detective to find out what you have just been doing; or, best of all, to call in an expert psychologist, if one happens to be handy, and ask him to make a scientific interpretation of your action and speech. You may then discover, to your surprise, that, instead of being bound for Boston, you are on your way to the Panama Canal.

Doubtless the time is coming, before we are through with the prepossession, when all domestic and social intercourse will be made luminous and transparent by the presence of expert psychologists. In those fair days social intercourse will be untroubled by falsehood or insincerity, or even by genial exaggeration. For . . . you are just about to tell your best story, or to utter a polite excuse, when the psychologist interposes: "I beg your pardon, sir, but since you are not a Freudian, let me say that you are unwittingly making the most intimate revelations." This sample of expert advice I quote from our Freudian behaviorist.

If then you question the propriety of the term "prepossession," I shall ask how it strikes you to find yourself treated as a merely external, natural fact—really only what other persons see and never what you yourself feel. And if you still object that, at any rate, no prepossession is implied in applying the idea to external nature, then I ask, Why this prejudice against nature? I will own that I share the prejudice. Yet when I sit down "in a cool hour," I find myself asking whether it is not a very peculiar world in which some things, such as men and animals, exist, not only as perceived by others, but also as felt by themselves, while other things, such as mountains and trees and solar systems—or whatever the demarcation of the individual may be—exist only as they are perceived by others. Is it not a strange logic which permits us to ask both how it looks and how it feels to be a man, but of the things of nature forbids us to ask more than how they look—to others?

And if you point to the fundamental absurdity of explaining nature by the analogy of human motives, then I shall ask how else we are to make nature intelligible. And I may also ask whether, in blissful unconsciousness, modern science may not be guilty of just this kind of interpretation. From the developed scientific standpoint the only real facts in nature are the mechanical facts, and the only true explanation a mechanical explanation. Is it then impertinent to remark, with Bergson, that man himself is a mechanic? Nay, that the scientific man is the mechanical man *par excellence?* At any rate, it seems that, as compared with art and philosophy, science is nothing if not practical.

So much, however, for the scientific prepossession as it finds expression in the science of psychology. If space permitted I might go on to show that this is only one of several points at which the prepossession touches human life. I might point, for example, to the great biological prepossession, which teaches that the only real thing about man is that he is an animal species. And as an illustration of the prepossession I should summon the scientific apostle of eugenics who, as a scientific test for determining a desirable marriage, proposes that we ignore the tastes of those to be married and study the procedure of the stock-farm. Since the appearance of the biological prepossession a couple of generations ago it seems that human life has become mainly a process of reproduction, and right living a matter of right reproduction.

Or I might point to the biological cult of the "strong man," which teaches that, since biological evolution is a competition for existence, therefore war is the proper business of human life; according to this prepossession, the real objection to an international league for peace is not that it is impracticable but that it is unbiological. Or I might point to the somewhat similar economic prepossession which teaches that economic laws are to be obeyed as sacred even if we should find it both useful and practicable to ignore them.

A very significant mark of the scientific prepossession, though somewhat thinly scientific, is the idea of scientific management and scientific efficiency which now seems to have conquered the world of business. Formerly scientific method was confined to special fields rather distinctively technical. The business man relied upon personal experience and common sense, of which he is supposed to hold a monopoly. When the business man submits his judgment to the direction of science it seems that there is little hope for the rest of us. Scientific management in business may therefore be regarded as only the next to the last step in the scientific organization of the whole of human life.

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